

White Paper

Sustainable Rating Systems and Healthcare Facilities

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Introduction:

In response to a growing national and global concern for environmental quality, and to marketplace demands, the U.S. construction industry is embracing the design, construction and operation of energy efficient, environmentally responsive buildings. Owners are including sustainable design objectives in their architectural programs; thus requiring their design and construction teams to identify, evaluate, select and integrate viable sustainable design strategies into their projects. Architects, engineers, architectural material and product manufacturers, general contractors and subcontractors, and others in the building delivery process are all responding to this new design and construction requirement.

A number of definitions of sustainable design have been developed, including the following:

- Design that meets the needs of the present without compromising the ability of future generations to meet their own needs. (U.N. Rio de Janeiro Conference on the Environment)
- A building that achieves the specified building performance requirements while minimizing disturbance to and improving the functioning of local, regional and global ecosystems both during and after it's construction and specified service life. (ASTM)

While these definitions define the broad parameters of sustainable development and design, the individual strategies that must be employed to create a "sustainable design" are not defined. In response to this issue, various sustainable design performance metrics have developed both in the U.S. and throughout the world. The most recognized and widely used sustainable rating system in the U.S. is the Leadership in Energy and Environmental Design (LEED) rating system, developed by the U.S. Green Building Council (USGBC). More on the LEED rating system will be presented later in this paper. First the case for sustainable design.

The Case for Sustainable Design:

The construction and use of buildings in the U.S. consumes 3 billion tons of raw materials annually, including the following:

- 40% of all raw stone, gravel, sand and steel;
- 25% of all virgin wood;
- Over 36% of total U.S. primary energy use;

- 65% of total U.S. electricity consumption;
- 75% of all PVC; and
- 12% of all fresh water.

Additionally, the construction and use of buildings generate enormous waste and pollution, including the following:

- 25 – 40% of all municipal waste (136 million tons a year);
- 50% of all CFCs;
- 30% of total U.S. greenhouse gas emissions; and
- A substantial portion of toxic emissions.

The healthcare industry is responsible for a share of this construction material use, waste and pollution:

- 5 million tons of waste a year to landfills -- 20 lbs. / bed / day + 2 lbs. / meal;
- 4th highest energy use of all building types;
- Medical waste single largest source of dioxin air pollution.

Medical care is also influenced by the design, construction and operation / maintenance practices. For example, of the 2.5 million healthcare patients each year afflicted with hospital acquired infection, roughly 6% of these are attributed to design / construction and operation / maintenance practices.

Because of the 24/7 operation of many healthcare facilities, the need to recruit and retain medical and administrative staff, and to create a healthy healthcare environment, the healthcare industry is seriously evaluating the applicability, costs and benefits of sustainable design, construction and operation. Healthcare providers recognize that they must lead a transformation of the healthcare industry to be more ecologically sustainable, and that they have a professional responsibility to build sustainability and to promote healthy buildings.

However, the reasons to integrate energy and environmentally responsive design, construction and operation strategies into healthcare facilities are not solely related to their energy savings and environmental benefits. The largest single annual operating cost at a hospital and other healthcare facilities is employee salaries, which may represent up to 90% of total operating costs. Thus, improving employee productivity,

well-being, satisfaction, retention and health results in greater economic benefit than is achieved through reduced energy costs alone. Also, creating a high performance healing environment is good for patients, staff and the community. Combining the non-energy and energy / environmental related benefits of sustainable design, construction and operation provides tremendous value to the hospital and to the community it serves.

A summary of the documented benefits of sustainable design, construction, operation practices is presented below:

- Improved comfort – indoor air quality
- Energy savings – lower operating costs
- Reduced environmental impact – natural resource conservation
- Improved productivity – lower absenteeism
- Staff well-being, satisfaction, and reduced turnover
- Low life-cycle costs – long-term performance
- Increased building valuation – higher quality building, longer equipment life, lower operating costs

Sustainable Rating Systems

The two sustainable rating systems that represent viable options for healthcare facilities are as follows:

- U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED); and
- American Society of Healthcare Engineer's (ASHE) Green Guidelines for Healthcare Construction (GGHC).

The LEED rating system is a voluntary, consensus-based national standard for high-performance, sustainable buildings. Members of the U.S. Green Building Council, representing all segments of the building industry, developed LEED and continue to contribute to its evolution. LEED standards are currently available for:

- New construction and major renovation projects (LEED-NC)
- Existing building operations (LEED-EB)
- Commercial interiors projects (LEED-CI, Pilot version)
- Core and shell projects (LEED-CS, Pilot version)
- LEED for Homes (LEED-H)

These LEED rating systems are typically organized into six rating categories, each category containing a number of prerequisite (mandatory) requirements and a number of optional (project team selected) credits or points:

Rating Category	Total Number of Prerequisite and Optional Credits
• Sustainable Site Development	1 / 14
• Water Efficiency	0 / 5
• Energy and Atmosphere	3 / 17
• Materials and Resources	1 / 13
• Indoor Environmental Quality	2 / 15
• Innovation and Design Process	0 / 5
Total: 7 / 69	

The emphasis of LEED-NC is design and construction of a sustainable building and not on operation and maintenance. Of the 7 prerequisite requirements and 69 optional credits, the design team is responsible for 5 prerequisites and 60 credits, the construction team is responsible for no prerequisites and 5 credits, and the owner team is responsible for 2 prerequisites and 5 credits. Little to no emphasis is placed on the operation and maintenance policies, procedures, and purchases after construction has been completed and the building is occupied.

Each LEED prerequisite requirement and optional credit has a number of criteria that must be met to demonstrate compliance with the requirement or credit. The Project Team determines which optional credits are appropriate (considering architectural / engineering integration, first cost, life-cycle cost, durability, health, safety, etc.) for integration into the project. The selected LEED optional credits, together with the LEED prerequisite requirements, must be documented in a manner to substantiate compliance with all LEED credit / requirement criteria. A new on-line application process is used for submitting compliance documentation. A LEED Certification process manager coordinates the selection, documentation preparation and submittal of LEED credits.

The number of LEED credits integrated into the final design, substantiated by acceptable documentation, and approved by a USGBC LEED Technical Review Team determines what level of rating is achieved:

LEED Rating Level	No. of LEED Credits Required
Platinum	52 – 69
Gold	39 – 51
Silver	33 – 38
Certified	26 – 32

LEED-NC has been used to certify healthcare facilities. Boulder Community Foothill Hospital was the first hospital in the U.S. to obtain Certification (Silver rating) under the LEED-NC rating system. Architectural Energy Corporation served as the sustainable design consultant and LEED Certification process manager for this project. A summary of LEED credits obtained by the Hospital under each rating category is presented below:

LEED Rating Category	Credits Awarded
• Sustainable Sites	7 credits
• Water Efficiency	1 credit
• Energy and Atmosphere	5 credits
• Materials and Resources	5 credits
• Indoor Environmental Quality	10 credits
• Innovation and Design Process	5 credits
Total: 33 credits	

AWARDED RATING LEVEL: LEED Silver

The LEED Scorecard for the Boulder Community Foothills Hospital is included as Appendix A.

Developed by the American Society for Healthcare Engineers (ASHE), the Green Guidelines for Healthcare Construction (GGHC) provide the healthcare sector with a self-certifying metric tool that designers, owners, and operators can use to evaluate their progress towards high performance healing environments.

The ASHE Green Guidelines for Healthcare Construction (GGHC) are based on LEED-NC requirements / criteria but customized for healthcare facilities. The current version of the GGHC (Version 2.0 Pilot, November 2004) is organized into two Project Checklists: Design / Construction and Operations. The Design / Construction Project Checklist contains 11 prerequisite requirements and 94 optional credits organized into 7 rating categories:

Rating Category	Total Number of Prerequisite and Optional Credits
Integrated Design	2 / 2
Sustainable Sites	1 / 18
Water Efficiency	1 / 7
Energy and Atmosphere	3 / 19
Materials and Resources	2 / 24
Indoor Environmental Quality	2 / 22
Innovation	0 / 4
Total: 11 / 94	

The Operations Project Checklist contains 10 prerequisite requirements and 72 optional credits organized into 8 rating categories:

Rating Category	Total Number of Prerequisite and Optional Credits
Integrated Operations	4 / 8
Energy Conservation	3 / 18
Water Conservation	1 / 8
Chemical Management	1 / 5
Waste Management	1 / 6
Environmental Services	0 / 9
Environmental Purchasing	0 / 11
Innovation	0 / 7
Total: 10 / 72	

At the present time, no achievement level threshold rankings -- Platinum, Gold, Silver or Certified -- have been established. At the conclusion of the Pilot Phase, the ASHE-GGHC committee may choose to establish threshold rankings based on the results and conclusions from the pilot projects.

Like LEED-NC, each ASHE-GGHC prerequisite requirement or optional credit has a number of criteria that must be met to obtain (comply with) the requirement or credit. However, unlike LEED-NC, no third-party certification process exists. Rather, the Project Team self-certifies that all targeted LEED credits have been achieved. However, the level of documentation required to substantiate compliance with the GGHC credits is defined by the Project Team, and not a third-party certifier.

Additionally, new healthcare construction projects cannot actually attain many of the Operations Project Checklist credits because they require a year’s worth of data to demonstrate compliance with the credit requirements. This type of project is encouraged to identify the Operations-related credits that will be pursued and develop policies and procedures for the new healthcare facility which demonstrate how these credits will be achieved. A GGHC coordinator typically assists the Project Team identify, evaluate, select and integrate GGHC credits for the project.

An ASHE-GGHC Project Checklist is provided in Appendix B.

The following figure summarizes the “pros” and “cons” of the LEED rating system versus the ASHE-GGHC rating system.

LEED-NC		ASHE-GGHC	
Pro	Con	Pro	Con
- Third-party validation	- Not specifically designed for healthcare facilities	- Healthcare specific rating system	- No third-party verification
- Formal Certification process	- Registration and Certification fees increase costs	- No registration or application fees	- No plaque or other formal recognition
- Broad industry acceptance	- Does not address operation-related issues	- Addresses healthcare O&M issues	- Not widely known, limited market acceptance
- Marketing advantages through the USGBC	- Requires extensive experience with Certification process	- Self-certifying, voluntary process	
- On-line application process		- No extensive documentation process. Project Team decides documentation requirements.	
		- ASHE Award as recognition	

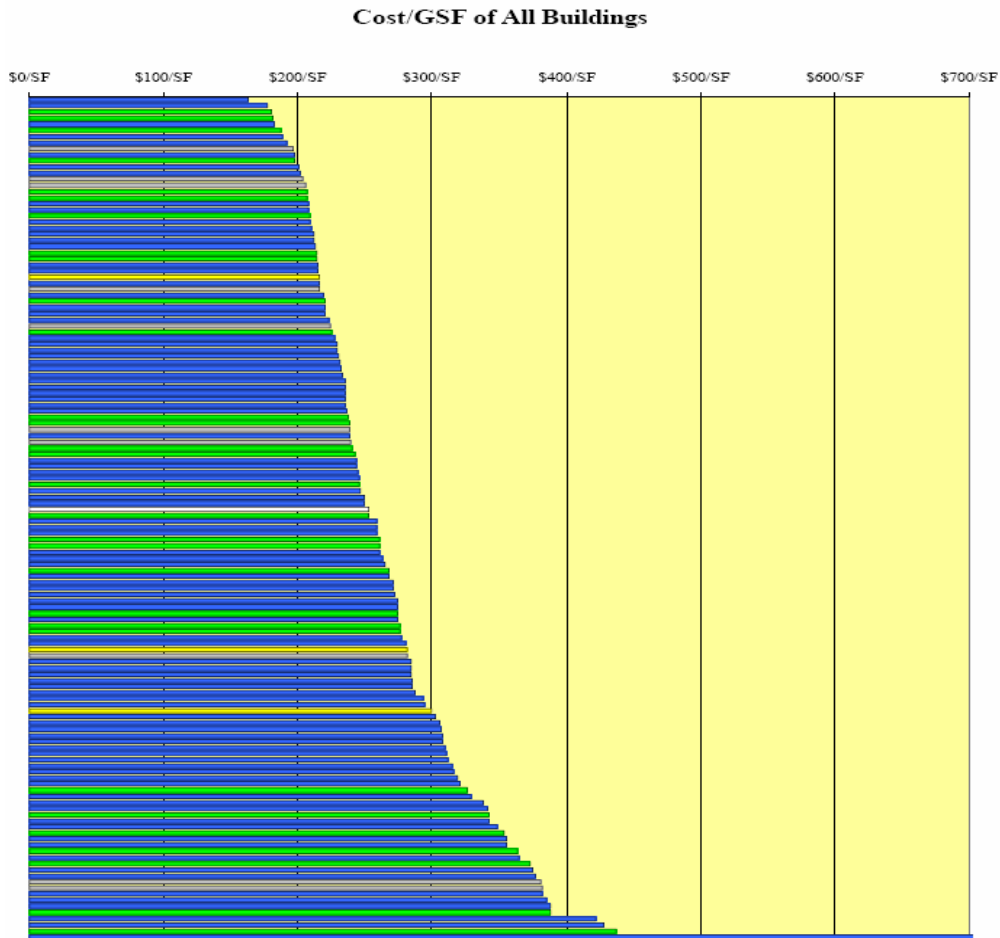
Premium for Sustainable Design and Rating

The premium -- hard costs (construction) and soft costs (design, registration / application fees) -- associated with sustainable design, construction and operation is a function of building type, location, targeted credits, design and construction team

knowledge and experience on sustainable design, and owner commitment. A number of studies have evaluated the cost and benefit of sustainable design and construction, a few of which are listed below.

- “The Cost and Financial Benefits of Green Buildings, Gregory Kats, October 2003.
- “The Cost and Financial Benefits of Green Buildings, Gregory Kats, December 2003.
- Costing Green: A Comprehensive Cost Data Base and Budgeting Methodology, Lisa Fay Matthiesson and Peter Morris, Davis Langdon, July 2004.

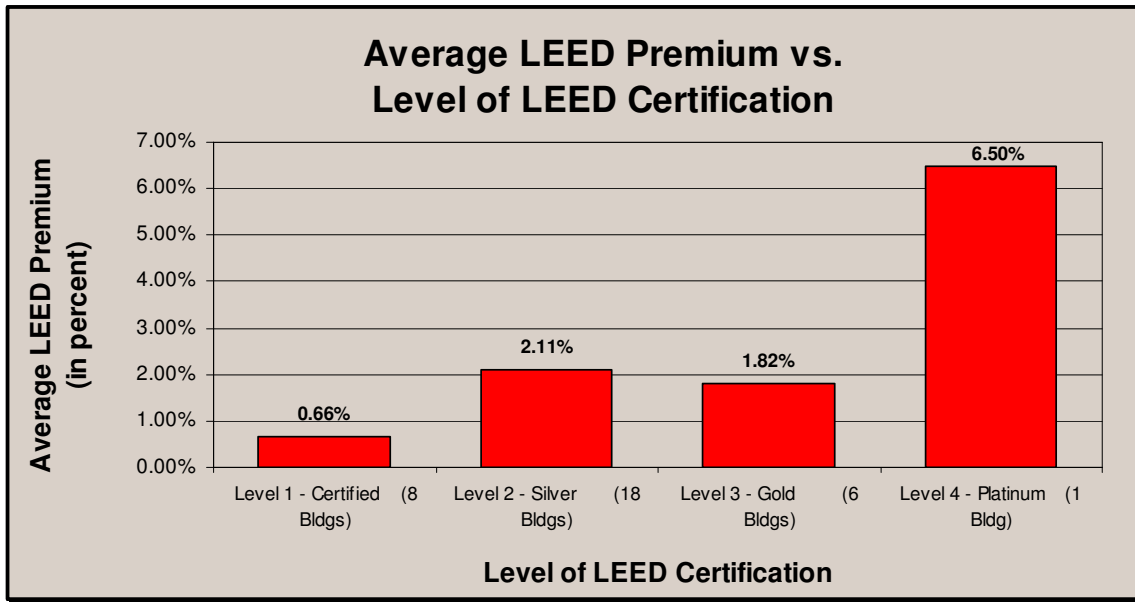
The Davis Langdon study compared sustainable building projects to conventional buildings of a similar type. 138 buildings were studied -- 93 non-LEED and 45 LEED-seeking. All costs were normalized for time and location to ensure consistency. The only distinction between the buildings was the intent to incorporate sustainable design features to achieve LEED Certification.

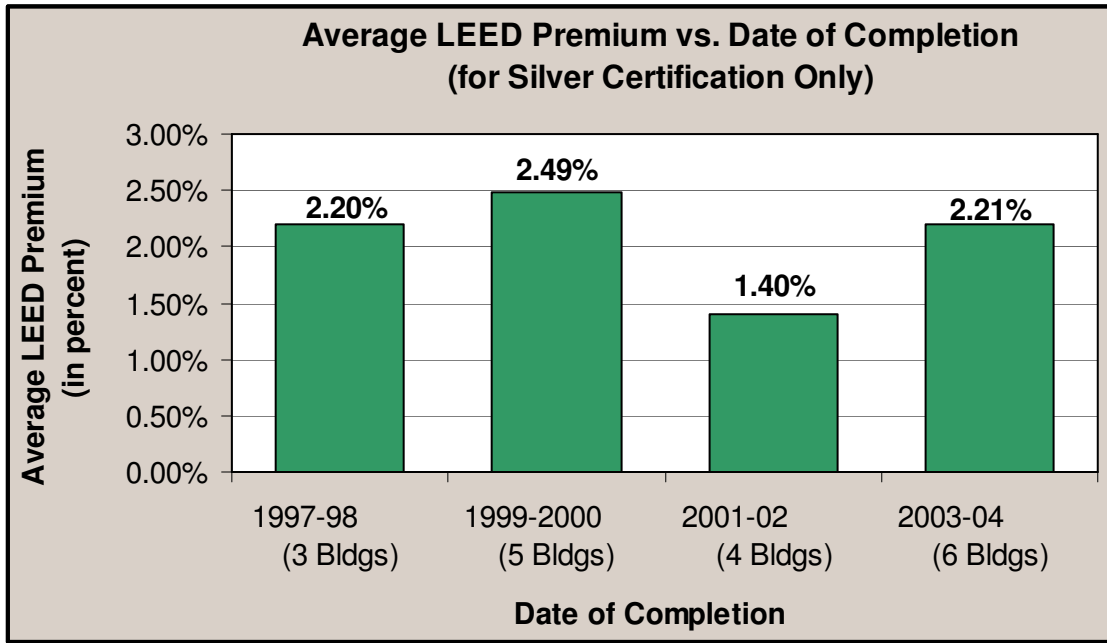


The Davis Langdon study sorted the results by location / climate and LEED rating levels to assess regional cost variation for sustainable design and construction.

	Platinum	Gold	Silver
Santa Barbara	7.8%	2.7%	1.0%
San Francisco	7.8%	2.7%	1.0%
Denver	7.6%	2.8%	1.2%
Boston	8.8%	4.2%	2.6%
Houston	9.1%	6.3%	1.7%

The following two figures present summary data from the Kats study relative to the average premium for each LEED Certification (rating) level, and the average premium for a LEED Silver rating based on date of completion.





Additionally, Architectural Energy Corporation has extensive experience in managing LEED Certification projects (10+ LEED Certified projects with 50 on-going LEED Certification efforts). On the basis of these studies and Architectural Energy Corporation’s experience, the typical premium, as a percent of construction cost, for designing and constructing buildings in response to LEED-NC or ASHE-GGHC criteria is summarized in the two tables below:

LEED-NC

Rating Level	Soft Cost	Hard Cost	Total
Platinum	1.5 – 2.5%	6.0%	7.5 >%
Gold	1.0 – 1.5%	1.5 – 3.5%	2.5 – 5.0%
Silver	0.5 – 1.0%	0.5 – 1.5%	1.0 – 2.5%
Certified	0.5%	0.0 – 0.5%	0.5 – 1.0%

ASHE-GGHC

Rating Level	Soft Cost	Hard Cost	Total
Platinum	1.0 – 1.5%	5 >%	6.0 >%
Gold	0.5 – 1.0%	1.5 – 3.5%	2.0 – 4.5%
Silver	0.25 – 0.5%	0.5 – 1.5%	0.75 – 2.0%
Certified	0.0 – 0.25%	0.0 – 0.5%	0.0 – 0.75%

Because the ASHE-GGHC does not involve third-party certification, with a corresponding reduction in documentation requirements and registration / application fees, the premium for soft costs is lower. Assuming similar sustainable strategies are pursued, the premium for hard costs should be comparable regardless of whether the LEED-NC or the ASHE-GGHC rating system is used. However, as discussed earlier, the GGHC has many credits associated with building operation, which may impact the costs of facility operation and maintenance.

However, it must be remembered that with this premium (added costs) comes many benefits, some more easily monetized than others. Studies examining the costs and benefits of sustainable design have found a benefit cost ratio of 10 to 1. That is for every dollar invested in sustainable design strategies, ten dollars of benefit was obtained. Thus, the return on investment is quite good and the benefits are distributed across all parties associated with the healthcare facility -- owner, patient, medical staff, administrative staff and the community. This fact allows healthcare planners and their design teams to take both a long-term view and a short-term view of the impact the new or renovated healthcare facility will have on business operations and on the environment.

Decision to Pursue Sustainable Rating

A number of options exist for using sustainable rating systems and a number of factors are involved in determining whether or not to pursue formal certification. The following four options have been used by Project Teams in regards to sustainable rating systems:

- Use LEED-NC rating system and pursue formal third-party certification.
- Use LEED-NC rating system as a design guide, but do not pursue formal third-party certification.

- Use ASHE-GGHC rating system as a design guide, with a Project Team determined level of documentation.
- Use “best practice” design and construction principles not sufficient to gain a LEED or a GGHC rating level.

The primary factor for determining whether to pursue certification under either LEED or GGHC criteria is an adequate policy reason to do so. That is, is there an overriding policy reason to obtain certification? For example, the Board of Trustees for Boulder Community Hospital decided to pursue LEED Certification as a public and visible expression of their commitment to sustainable design practices and their leadership position in the community. Also, they saw a “healthy” building as a marketplace differentiator, and have widely publicized the sustainable design features of the new Foothills Hospital.

Other factors that influence whether to pursue certification under a sustainable rating system are as follows:

- Commitment of the hospital Board of Trustees or the healthcare system Board of Directors to pursue sustainable design, construction and operation.
- Commitment of hospital medical and administrative staff to pursue sustainable design, construction and operation.
- Support / expectation of the local community for integration of sustainable design principles into the project.
- Adequacy of budget -- design fees and construction budget -- to cover any premium associated with pursuing sustainable design.
- Expertise and experience of the Design Team and Construction Team with sustainable design principles and practices.

Each healthcare organization has a unique set of circumstances that must be evaluated to determine whether pursuing certification under a sustainable rating system is appropriate and feasible. However, these same healthcare organizations have responsibility to their patients, medical staff, administrative staff, and the community it serves to create facilities which promote healing, well-being, productivity and satisfaction, as well as reduce energy and environmental impacts. Sustainable design is an effective strategy for all healthcare facilities, whether formal certification under a sustainable rating system is used or not. It is a simple extension of the Hippocratic Oath, “First, do no harm” by designing and operating healthcare facilities that will do no harm to the patients, staff, visitors and the community that use, work and rely on this essential community service.

Appendix A
LEED-NC Scorecard –
Boulder Community Foothills Hospital

Sustainable Rating Systems and Healthcare Facilities

Project	Boulder Community Hospital	3/21/2006
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<input checked="" type="checkbox"/> Y	<input type="checkbox"/> ?	<input checked="" type="checkbox"/> N	Project Points	Possible Points	Credit Category	Credit Title
Sustainable Sites						
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	0	Prerequisite 1	Erosion and Sedimentation Control
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	1	Credit 1	Site Selection
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	1	Credit 2	Urban Redevelopment
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	1	Credit 3	Brownfield Redevelopment
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	1	Credit 4.1	Alternative Transportation, Locate Near Public Transportation
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	1	Credit 4.2	Alternative Transportation, Bicycle Storage & Changing Rooms
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	1	Credit 4.3	Alternative Transportation, Alternative Fuel Refueling Stations
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	1	Credit 4.4	Alternative Transportation, Minimum or No New Parking
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	1	Credit 5.1	Reduced Site Disturbance, Protect or Restore Open Space
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	1	Credit 5.2	Reduced Site Disturbance, Reduce Footprint & Increase Open Space
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	1	Credit 6.1	Stormwater Management, No Net Increase or 25% Decrease
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	1	Credit 6.2	Stormwater Management, Treatment Systems
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	1	Credit 7.1	Landscape & Exterior Design to Reduce Heat Islands, Site Surfaces
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	1	Credit 7.2	Landscape & Exterior Design to Reduce Heat Islands, Roof Surfaces
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	1	Credit 8	Light Pollution Reduction
7	0	7	7	14	Subtotal - Sustainable Sites	

Water Efficiency						
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	1	Credit 1.1	Water Efficient Landscaping, Reduce by 50%
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	1	Credit 1.2	Water Efficient Landscaping, Reduce Additional 50% or No Irrigation
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	1	Credit 2	Innovative Wastewater Technologies
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	1	Credit 3.1	Water Use Reduction, 20% Reduction
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	1	Credit 3.2	Water Use Reduction, Additional 10% Reduction
1	0	4	1	5	Subtotal - Water Efficiency	

Energy and Atmosphere						
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	0	Prerequisite 1	Fundamental Building Systems Commissioning
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	0	Prerequisite 2	Minimum Energy Performance
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	0	Prerequisite 3	CFC Reduction in HVAC&R Equipment
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2	2	Credit 1.1	Optimize Energy Performance, 20% New 10% Existing
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2	2	Credit 1.2	Optimize Energy Performance, 30% New 20% Existing
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	2	Credit 1.3	Optimize Energy Performance, 40% New 30% Existing
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	2	Credit 1.4	Optimize Energy Performance, 50% New 40% Existing
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	2	Credit 1.5	Optimize Energy Performance, 60% New 50% Existing
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	1	Credit 2.1	Renewable Energy, 5% Contribution
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	1	Credit 2.2	Renewable Energy, 10% Contribution
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	1	Credit 2.3	Renewable Energy, 20% Contribution
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	1	Credit 3	Additional Commissioning
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	1	Credit 4	Elimination or HCFC's and Halons
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	1	Credit 5	Measurement and Verification
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	1	Credit 6	Green Power
0	9	5	17	Subtotal - Energy and Atmosphere		

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					Materials and Resources		
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	0	Prerequisite 1	Storage & Collection of Recyclables	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	1	Credit 1.1	Building Reuse, Maintain 75% of Existing Shell	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	1	Credit 1.2	Building Reuse, Maintain Additional 25% of Shell	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	1	Credit 1.3	Building Reuse, Maintain 100% Shell & 50% Non-Shell	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	1	Credit 2.1	Construction Waste Management, Salvage or Recycle 50%	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	1	Credit 2.2	Construction Waste Management, Salvage Additional 25%	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	1	Credit 3.1	Resource Reuse, Specify 5% Reuse	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	1	Credit 3.2	Resource Reuse, Specify 10% Reuse	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	1	Credit 4.1	Recycled Content, Specify 25% Recycled Content	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	1	Credit 4.2	Recycled Content, Specify 50% Recycled Content	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	1	Credit 5.1	Local/Regional Materials, 20% Manufactured Locally	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	1	Credit 5.2	Local/Regional Materials, of 20% Above 50% Harvested Locally	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	1	Credit 6	Rapidly Renewable Materials	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	1	Credit 7	Certified Wood	
	0	8	5	13	Subtotal - Materials and Resources		

					Indoor Environmental Quality		
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	0	Prerequisite 1	Minimum IAQ Performance	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0	0	Prerequisite 2	Environmental Tobacco Smoke (ETS) Control	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	1	Credit 1	Carbon Dioxide (CO ₂) Monitoring	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	1	Credit 2	Increase Ventilation Effectiveness	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	1	Credit 3.1	Construction IAQ Management Plan, Prior	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	1	Credit 3.2	Construction IAQ Management Plan, During	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	1	Credit 4.1	Low-Emitting Materials, Adhesives	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	1	Credit 4.2	Low-Emitting Materials, Paints	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	1	Credit 4.3	Low-Emitting Materials, Carpet	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	1	Credit 4.4	Low-Emitting Materials, Composite Wood	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	1	Credit 5	Indoor Chemical and Pollutant Source Control	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	1	Credit 6.1	Controllability of Systems, Operable Window	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	1	Credit 6.2	Controllability of Systems, Individual Controls	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	1	Credit 7.1	Thermal Comfort, Comply with ASHRAE 55-1992	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	1	Credit 7.2	Thermal Comfort, Permanent Monitoring System	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	1	Credit 8.1	Daylight and Views, Diffuse Sunlight to 75% of Space	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	1	Credit 8.2	Daylight and Views, Direct Line of Site to 90% of Space	
	0	5	10	15	Subtotal - Indoor Environmental Quality		

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Innovation & Design Process						
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	1	Credit 1.1	Innovation in Design, As approved by USGBC
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	1	Credit 1.2	Innovation in Design, As approved by USGBC
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	1	Credit 1.3	Innovation in Design, As approved by USGBC
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	1	Credit 1.4	Innovation in Design, As approved by USGBC
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	1	Credit 2	LEED™ Accredited Professional
	0	0	5	5	Subtotal - Innovation & Design Process	
	0	33		69	TOTAL POINTS POSSIBLE	
		33			TOTAL PROJECT POINTS	

LEED GREEN BUILDING CERTIFICATION LEVELS		
<input type="checkbox"/>	= 26 - 32	LEED CERTIFIED
<input type="checkbox"/>	= 33 - 38	LEED CERTIFIED SILVER LEVEL
<input type="checkbox"/>	= 39 - 51	LEED CERTIFIED GOLD LEVEL
<input type="checkbox"/>	= 52 +	LEED CERTIFIED PLATINUM LEVEL

Appendix B
ASHE-GGHC Project Checklist

Construction

Y - (yes) you are moderately confident that you can attain the credit.
? - (maybe) it will be challenging for this project and you are uncertain of your ability to attain it but you will try.
N - (no) while technically possible, you currently don't expect to try to achieve this credit in this project due to cost or other tradeoffs with project goals.
NA - (not applicable) it is inherently physically unattainable for this particular project regardless of effort due to physical conditions or project scope.

Note: an Excel spreadsheet of this checklist is available for download at www.gghc.org

Integrated Design

Y	Prereq 1	Integrated Design Process	Required
Y	Prereq 2	Environmental Health Mission Statement & Program	Required

Sustainable Sites 18 Points

Y	Prereq 1	Erosion & Sedimentation Control	Required			
Y	?	N	NA	Credit 1	Site Selection	1
Y	?	N	NA	Credit 2	Development Density	1
Y	?	N	NA	Credit 3.1	Brownfield Redevelopment: Basic Remediation Level	1
Y	?	N	NA	Credit 3.2	Brownfield Redevelopment: Residential Remediation Level	1
Y	?	N	NA	Credit 4.1	Alternative Transportation: Public Transportation Access	1
Y	?	N	NA	Credit 4.2	Alternative Transportation: Bicycle Storage & Changing Rooms	1
Y	?	N	NA	Credit 4.3	Alternative Transportation: Alternative Fuel Vehicles	1
Y	?	N	NA	Credit 4.4	Alternative Transportation: Parking Capacity	1
Y	?	N	NA	Credit 5.1	Reduced Site Disturbance: Protect or Restore Open Space	1
Y	?	N	NA	Credit 5.2	Reduced Site Disturbance: Development Footprint	1
Y	?	N	NA	Credit 6.1	Stormwater Management: Rate & Quantity	1
Y	?	N	NA	Credit 6.2	Stormwater Management: Treatment	1
Y	?	N	NA	Credit 7.1	Heat Island Effect: Non-Roof	1
Y	?	N	NA	Credit 7.2	Heat Island Effect: Roof	1
Y	?	N	NA	Credit 8	Light Pollution Reduction	1
Y	?	N	NA	Credit 9	Connection to the Natural World: Places of Respite	1
Y	?	N	NA	Credit 10.1	Community Contaminant Prevention: Airborne Releases	1
Y	?	N	NA	Credit 10.2	Community Contaminant Prevention: Leaks & Spills	1

Water Efficiency 7 Points

Y	Prereq 1	Potable Water Use for Equipment Cooling	Required			
Y	?	N	NA	Credit 1.1	Water Efficient Landscaping: Reduce Potable Water Use by 50%	1
Y	?	N	NA	Credit 1.2	Water Efficient Landscaping: No Potable Water Use or No Irrigation	1
Y	?	N	NA	Credit 2	Innovative Wastewater Technologies	1
Y	?	N	NA	Credit 3.1	Domestic Potable Water Use Reduction: 20%	1
Y	?	N	NA	Credit 3.2	Domestic Potable Water Use Reduction: 30%	1
Y	?	N	NA	Credit 4.1	Process Water Use Reduction: Measurement & Verification	1
Y	?	N	NA	Credit 4.2	Process Water Use Reduction: Low or No Water Use Building System Equipment	1

Energy & Atmosphere

19 Points

Y		Prereq 1	Fundamental Building Systems Commissioning	Required	
Y		Prereq 2	Minimum Energy Performance	Required	
Y		Prereq 3	CFC Reduction in HVAC&R Equipment	Required	
Y	?	N	NA	Credit 1.1 Optimize Energy Performance: 5%	1
Y	?	N	NA	Credit 1.2 Optimize Energy Performance: 10%	1
Y	?	N	NA	Credit 1.3 Optimize Energy Performance: 15%	1
Y	?	N	NA	Credit 1.4 Optimize Energy Performance: 20%	1
Y	?	N	NA	Credit 1.5 Optimize Energy Performance: 25%	1
Y	?	N	NA	Credit 1.6 Optimize Energy Performance: 30%	1
Y	?	N	NA	Credit 1.7 Optimize Energy Performance: 35%	1
Y	?	N	NA	Credit 1.8 Optimize Energy Performance: 40%	1
Y	?	N	NA	Credit 2.1 Renewable Energy: 1%	1
Y	?	N	NA	Credit 2.2 Renewable Energy: 2%	1
Y	?	N	NA	Credit 2.3 Renewable Energy: 5%	1
Y	?	N	NA	Credit 3 Additional Commissioning	1
Y	?	N	NA	Credit 4 Refrigerant Selection	1
Y	?	N	NA	Credit 5 Measurement & Verification	1
Y	?	N	NA	Credit 6.1 Energy Supply Efficiency. 10%	1
Y	?	N	NA	Credit 6.2 Energy Supply Efficiency. 15%	1
Y	?	N	NA	Credit 6.3 Energy Supply Efficiency. 17%	1
Y	?	N	NA	Credit 6.4 Energy Supply Efficiency. 18%	1
Y	?	N	NA	Credit 7 Medical Equipment Efficiency	1

Sustainable Rating Systems and Healthcare Facilities

Materials & Resources

24 Points

			Prereq 1	Storage & Collection of Recyclables	Required
			Prereq 2	Mercury Elimination	Required
?	N	NA	Credit 1.1	Building Reuse: Maintain 40% of Existing Walls, Floors & Roof	1
?	N	NA	Credit 1.2	Building Reuse: Maintain 80% of Existing Walls, Floors & Roof	1
?	N	NA	Credit 1.3	Building Reuse: Maintain 50% of Interior Non-Structural Elements	1
?	N	NA	Credit 2.1	Construction Waste Management: Divert 50% from Landfill & Incineration	1
?	N	NA	Credit 2.2	Construction Waste Management: Divert 75% from Landfill & Incineration	1
?	N	NA	Credit 2.3	Construction Practices: Site & Materials Management	1
?	N	NA	Credit 2.4	Construction Practices: Utility & Emissions Control	1
?	N	NA	Credit 3.1	Resource Reuse 5%	1
?	N	NA	Credit 3.2	Resource Reuse 10%	1
?	N	NA	Credit 4.1	Recycled Content: 10%	1
?	N	NA	Credit 4.2	Recycled Content: 20%	1
?	N	NA	Credit 5.1	Regional Materials: 10%	1
?	N	NA	Credit 5.2	Regional Materials: 20%	1
?	N	NA	Credit 6	Rapidly Renewable Materials: 5%	1
?	N	NA	Credit 7	Certified Wood	1
?	N	NA	Credit 8.1	PBT Elimination: Dioxins	1
?	N	NA	Credit 8.2	PBT Elimination: Mercury Use in Equipment	1
?	N	NA	Credit 8.3	PBT Elimination: Lead & Cadmium	1
?	N	NA	Credit 9.1	Furniture & Medical Furnishings: Resource Reuse	1
?	N	NA	Credit 9.2	Furniture & Medical Furnishings: Materials	1
?	N	NA	Credit 9.3	Furniture & Medical Furnishings: Manufacturing, Transportation & Recycling	1
?	N	NA	Credit 10	Copper Reduction	1
?	N	NA	Credit 11.1	Resource Use: Design for Flexibility	1
?	N	NA	Credit 11.2	Resource Use: Minimize Materials	1

Environmental Quality 24 Points

<input type="checkbox"/>	Prereq 1	Minimum IAQ Performance	Required
<input type="checkbox"/>	Prereq 2	Asbestos Removal or Encapsulation	Required

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1	Air Quality Monitoring	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2	Increase Ventilation Effectiveness	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3.1	Construction IAQ Management Plan: During Construction	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3.2	Construction IAQ Management Plan: Before Occupancy	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.1	Low-Emitting Materials: Interior Adhesives & Sealants	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.2	Low-Emitting Materials: Wall & Ceiling Finishes	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.3	Low-Emitting Materials: Flooring Systems	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.4	Low-Emitting Materials: Composite Wood & Insulation	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.5	Low-Emitting Materials: Furniture & Medical Furnishings	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.6	Low-Emitting Materials: Exterior Applied Products	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 5.1	Chemical & Pollutant Source Control: Outdoor	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 5.2	Chemical & Pollutant Source Control: Indoor	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 6.1	Controllability of Systems: Lighting	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 6.2	Controllability of Systems: Thermal & Ventilation	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 7	Continuous Comfort Monitoring System	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 8.1a	Daylight & Views: Daylight for Occupied Spaces: 34-48% flr w/in 15'	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 8.1b	Daylight & Views: Daylight for Occupied Spaces: 38-56% flr w/in 15'	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 8.1c	Daylight & Views: Daylight for Occupied Spaces: 42-64% flr w/in 15'	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 8.1d	Daylight & Views: Daylight for Occupied Spaces: 90% access to daylight	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 8.1e	Daylight & Views: Daylight for Occupied Spaces: 2% DF for 75% of staff	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 8.2	Daylight & Views: Building Orientation	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 8.3	Daylight & Views: Views for Occupied Spaces	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 8.4	Daylight & Views: Lighting & Circadian Rhythm	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 9	Acoustic Environment	1

Innovation in Design 4 Points

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.1	Innovation in Design:	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.2	Innovation in Design	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.3	Innovation in Design	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.4	Innovation in Design	1

Construction Project Total 96 Points

Operations

Integrated Operations 5 Points

Y	Prereq 1	Ongoing Self-Certification	Required
Y	Prereq 2	Integrated Operations & Maintenance Process	Required
Y	Prereq 3	Environmental Tobacco Smoke Control	Required
Y	Prereq 4	Outside Air Introduction & Exhaust Systems	Required

Y	?	N	NA	Credit 1.1	Building Operations & Maintenance: Staff Education	1
Y	?	N	NA	Credit 1.2	Building Operations & Maintenance: Building Systems Maintenance	1
Y	?	N	NA	Credit 1.3	Building Operations & Maintenance: Building Systems Monitoring	1
Y	?	N	NA	Credit 2.1	IAQ Management: Maintaining Indoor Air Quality	1
Y	?	N	NA	Credit 2.2	IAQ Management: Reduce Particulates in Air Distribution	1

Transportation Operations 3 Points

Y	?	N	NA	Credit 1.1	Alternative Transportation: Public Transportation Access	1
Y	?	N	NA	Credit 1.2	Alternative Transportation: Low Emitting & Fuel Efficient Vehicles	1
Y	?	N	NA	Credit 1.3	Alternative Transportation: Carpool Programs	1

Energy Efficiency 18 Points

Y	Prereq 1	Existing Building Commissioning	Required
Y	Prereq 2	Minimum Building Energy Performance	Required
Y	Prereq 3	Ozone Protection	Required

Y	?	N	NA	Credit 1.1	Optimize Energy Performance: Energy Star score of 63	1
Y	?	N	NA	Credit 1.2	Optimize Energy Performance: Energy Star score of 67	1
Y	?	N	NA	Credit 1.3	Optimize Energy Performance: Energy Star score of 71	1
Y	?	N	NA	Credit 1.4	Optimize Energy Performance: Energy Star score of 75	1
Y	?	N	NA	Credit 1.5	Optimize Energy Performance: Energy Star score of 79	1
Y	?	N	NA	Credit 1.6	Optimize Energy Performance: Energy Star score of 83	1
Y	?	N	NA	Credit 1.7	Optimize Energy Performance: Energy Star score of 87	1
Y	?	N	NA	Credit 1.8	Optimize Energy Performance: Energy Star score of 91	1
Y	?	N	NA	Credit 1.9	Optimize Energy Performance: Energy Star score of 95	1
Y	?	N	NA	Credit 1.10	Optimize Energy Performance: Energy Star score of 99	1
Y	?	N	NA	Credit 2.1	On-Site & Off-Site Renewable Energy: 1% on or 5% off	1
Y	?	N	NA	Credit 2.2	On-Site & Off-Site Renewable Energy: 2% on or 10% off	1
Y	?	N	NA	Credit 2.3	On-Site & Off-Site Renewable Energy: 5% on or 25% off	1
Y	?	N	NA	Credit 2.4	On-Site & Off-Site Renewable Energy: 10% on or 50% off	1
Y	?	N	NA	Credit 3	Energy Efficient Equipment	1
Y	?	N	NA	Credit 4	Refrigerant Selection	1
Y	?	N	NA	Credit 5.1	Performance Measurement: Enhanced Metering	1
Y	?	N	NA	Credit 5.2	Performance Measurement: Emission Reduction Reporting	1

Water Conservation

8 Points

<input type="checkbox"/>		Prereq 1	Minimum Water Efficiency	Required	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.1 Water Efficient Landscaping: Reduce potable water use by 50%	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.2 Water Efficient Landscaping: Eliminate potable water use	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2.1 Building Water Use Reduction: Reduce fixture use by 10%	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2.2 Building Water Use Reduction: Reduce fixture use by 20%	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3.1 Process Water Efficiency : Reduce 20%	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3.2 Process Water Efficiency : Reduce 30%	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3.3 Process Water Efficiency : Reduce 40%	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4 Performance Measurement: Enhanced Metering	1

Chemical Management

5 Points

<input type="checkbox"/>		Prereq 1	Polychlorinated Biphenyl (PCB) Removal	Required	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.1 Community Contaminant Prevention: Airborne Releases	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.2 Community Contaminant Prevention: Leaks & Spills	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2.1 Indoor Pollutant Source Control & Other Occupational Exposures: Chemical Management & M	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2.2 Indoor Pollutant Source Control & Other Occupational Exposures: High Hazard Chemicals	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3 Chemical Discharge: Pharmaceutical Management & Disposal	1

Waste Management

6 Points

<input type="checkbox"/>		Prereq 1	Waste Stream Audit	Required	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.1 Total Waste Reduction: 15%	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.2 Total Waste Reduction: 25%	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.3 Total Waste Reduction: 35%	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2.1 Regulated Medical Waste Reduction: <10%	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2.2 Regulated Medical Waste Reduction: Minimize incineration	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3 Food Waste Reduction	1

Environmental Services

9 Points

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.1 Outdoor Grounds & Building Exterior Management : Implement 4 strategies	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.2 Outdoor Grounds & Building Exterior Management : Implement 8 strategies	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2 Indoor Integrated Pest Management	2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3 Environmentally Preferable Cleaning Policy	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.1 Sustainable Cleaning Products & Materials: 30% of annual purchases	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.2 Sustainable Cleaning Products & Materials: 60% of annual purchases	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.3 Sustainable Cleaning Products & Materials: 90% of annual purchases	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 5 Environmentally Preferable Janitorial Equipment	1

Environmentally Preferable Purchasing

11 Points

Y	?	N	NA	Credit 1.1	Food: Organic or Sustainable	1
Y	?	N	NA	Credit 1.2	Food: Antibiotics	1
Y	?	N	NA	Credit 1.3	Food: Local Production / Food Security	1
Y	?	N	NA	Credit 2	Janitorial Paper & Other Disposable Products	1
Y	?	N	NA	Credit 3	Electronics Purchasing & End of Life Management	1
Y	?	N	NA	Credit 4.1	Toxic Reduction: Mercury	1
Y	?	N	NA	Credit 4.2	Toxic Reduction: DEHP	1
Y	?	N	NA	Credit 4.3	Toxic Reduction: Natural Rubber Latex	1
Y	?	N	NA	Credit 5	Furniture & Medical Furnishings	1
Y	?	N	NA	Credit 6.1	IAQ Compliant Products: 45% of annual purchases	1
Y	?	N	NA	Credit 6.2	IAQ Compliant Products: 90% of annual purchases	1

Innovation in Operation

7 Points

Y	?	N		Credit 1.1	Innovation in Operations	1
Y	?	N		Credit 1.2	Innovation in Operations	1
Y	?	N		Credit 1.3	Innovation in Operations	1
Y	?	N		Credit 1.4	Innovation in Operations	1
Y	?	N		Credit 2	Documenting Sustainable Operations: Business Case Impacts	1
Y	?	N		Credit 3.1	Documenting Productivity Impacts: Absenteeism & Health Care Cost Impacts	1
Y	?	N		Credit 3.2	Documenting Productivity Impacts: Research Initiatives	1

Operations Project Total

72 Points