



Guiding Principles Compliance (GPC) for New Construction & Existing Buildings



Agenda

- Green Building Initiative (GBI) Overview
- Guiding Principles Compliance (GPC)
 - Background
 - Assessment & Certification System
 - Professional Training
 - How to Start a Project



The Green Building Initiative

- Nonprofit corporation HQ in Portland, OR
 - Mission: Accelerate the adoption of building practices that result in energy efficient, healthier & environmentally sustainable buildings
- Founded in 2004
- U.S. provider of the Green Globes[®] and the Guiding Principles Compliance assessment & certification systems
 - GPC EB for existing buildings
 - GPC NC for new construction & major renovations





The Green Building Initiative

 American National Standards Institute accredited standards developer since 2005



- Developed Green Globes[®] from an industry standard
 - ANSI/GBI 01-2010: Green Building Assessment Protocol for Commercial Buildings
 - "Continuous maintenance" update process



Guiding Principles Background

- The federal government established sustainability requirements for all agencies:
 - Executive Order 13423 in 2007
 - High Performance and Sustainable Buildings Guidance in 2008
 - Executive Order 13514 in 2009
 - Buildings >5000 square feet must comply with the established requirements

Register	Thursday, October 8, 2009
[[fedlerral]	Part VII The President Executive Order 13514—Federal Leadership in Environmental, Energy, and Economic Performance







Guiding Principles Compliance Program Launch

- GBI launches Guiding Principles Compliance Programs: EB in 2011 and NC in 2014
 - Requested of GBI by a federal agency
 - Used EO's, ISWG High Performance and Sustainable Building Guidance document (12/1/08) and ENERGY STAR Portfolio Manager to specify criteria for assessing GP's
 - Delivers uniform scoring methodology and a third-party on-site assessment, which establishes a repeatable and consistent way to interpret, evaluate, and assess buildings for compliance.



GBI Launches Guiding Principles Compliance Certification Program Addressing EO 13514 Requirements for Existing Buildings - Veterans Affairs Orders 180 Third-Party Assessments

WASHINGTON, DC - Deo 7, 2011 - The Green Building Initiative launched today its Guiding Principles Compliance certification program for existing buildings - a tool that gives federal agencies a means to assess and demonstrate compliance with the requirements of Executive Order 13514. The new program was selected by the Department of Veterans Affaits to measure and demonstrate compliance to the Guiding Principles for 180 VA buildings aiready undergoing Green Globes certification. These facilities will complete the supplemental Guiding Principles certification process in arry 2012.

Executive Order 13514 states that by 2015, 15% of each agency's federally owned or leased buildings 5,000 square feet or larger must incorporate the sustainable practices from the <u>Federal Leadership in High</u> <u>Performance and Sustainable Buildings Guidance Document (12/1/08)</u>. The Five Guiding Principles with which federal agency buildings must comply are:

- 1. Employ integrated design principles 2. Optimize energy performance
- 2. Optimize energy performance 3. Protect and conserve water
- Frotect and conserve water
 Enhance quality of indoor air environment
- Reduce environmental impact of building materials

Reporting mandates for these requirements stipulate that there should be accuracy and consistency in reporting across agencies; agencies should leverage existing resources which are already dedicated to property management; agencies must demonstrate annual progress toward 100% compliance to the goals; and these goals should be met while creating the least amount of disruption to agencies and their missions.

The Green Building Initiative is a 501 (c) (3) nonprofit organization, ANSI Accredited Standards Developer, and well established provider of building sustainability assessment and certification services within the Federal Sector.

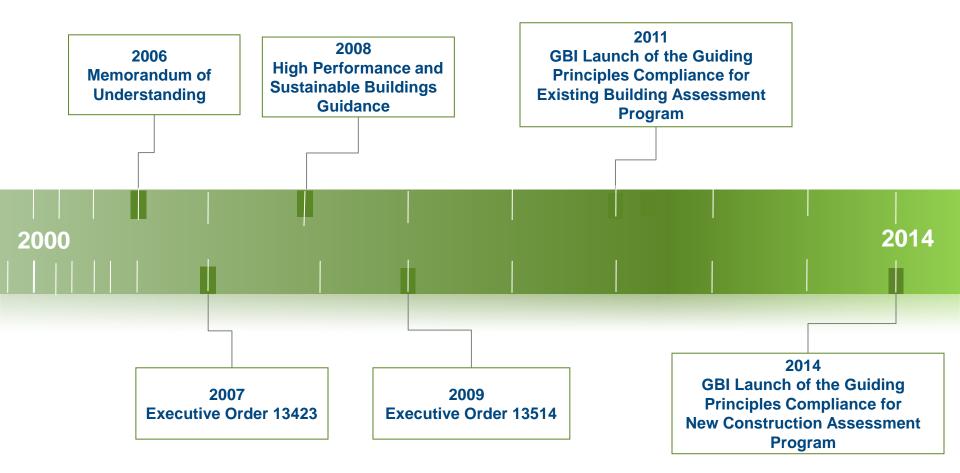
Although GBP's Green Globes Continual Improvement of Existing Buildings (CIEB) Program has been shown to significantly overlap the Guiding Principles, a separate assessment program was necessary to meet the VA's compliance requirements. Accordingly, GBI developed a dedicated program that incorporates an intuitive self-evaluation survey, an on-site assessment and documentation review by a third-party sustainability expert, and a certification correlation for each building. Agencies may choose to pursue either or both certifications (Green Globes and Guiding Principles Compliance), which can be generally completed from starts to finish generally within about three months.

GBTs program has been developed to address the specific needs of Federal Government agencies and represents practical, throrough, and oredible means to demonstrate compliance and required by Executive Order 13514. By virtue of the involvement of a third-party and standardized means for determining compliance and reporting, it sets a standard for consistency and accuracy. With OBS's rating scale, even buildings that complete the process achieving less than full compliance can be certified for their level of compliance and be recognized for their building's achievement. The program can be deployed portfolio-wide with minimal training, discounts for campus buildings, and does not require the involvement of external consultants.



Guiding Principles Compliance: Assessment Program History











Guiding Principles Compliance (GPC) Program Overview



Available GPC Programs



- GPC for New Construction
 - Includes
 - Mandatory preliminary review (Pre-Design or Design)
 - Owner project requirements and narrative OR construction documents review
 - Mandatory site assessment
 - Additional preliminary review available for an additional fee
- GPC for Existing Buildings
 - Includes
 - Mandatory site assessment



GPC Program Components

Guiding Principles Compliance

First 3rd party assessment and rating program designed specifically for federal agencies to assess compliance with the Guiding Principles.

- Includes
 - Simple-to-use interactive survey
 - Interactive Assessor review
 - A self-evaluation report based on the user's responses to the survey
 - On-site assessment to verify compliance
 - Detailed report outlining the compliance score, rating and recommendations
 - Supplemental tools to enhance and clarify the Guiding Principles Compliance process



GPC Eligibility Requirements



- The Federal Government must be the owner or lessee (special considerations for local or state government)
- The building must be at least 5,000 square feet in size
- New construction
 - Project may be occupied <18 months</p>
 - Ground Up construction, Major renovations and additions can be certified under this program
- Existing Buildings
 - Building must have 12 consecutive months of operational data



Roles and Responsibilities



_		
1.	Green Building Initiative Staff	Provide user account and technical support, project manage the assessment process, including: order review, assessor assignment, assessment scheduling, report review, delivery of final building rating and certification, recognition fulfillment.
2.	Client	Completes GPC survey, provide documentation to assigned assessor for review, confirms site visit requirements (space, personnel, time), assembles team for site visit, and reviews assessors findings.
3.	Guiding Principles Compliance Professional (GPCP) (optional role)	Independent Agent who assists clients in the GPC assessment and certification process. Varying duties dependent upon contract with client ranging from all client-related tasks to technical support and consulting.
4.	Green Globes Assessor (GGA)	Independent Contractor who reviews documentation, visits site to interview key personnel and tour building to determine point awards. Writes the final building report and recommends certification rating based upon the verified number of points achieved.

Benefits of a GPC Assessment





Identifies and verifies the use of credible sustainable practices in design, construction, and/or management of a facility



Aids facility managers create performance benchmarks that can act as a guide for operational improvements and future projects



Ensures independent, accurate and consistent reporting within agencies



Demonstrates annual progress toward 100% compliance with Executive Orders



Meets requirements with minimal disruption to each agency's core mission



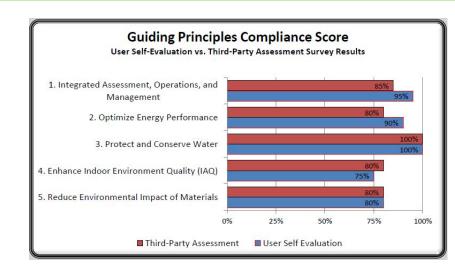
Includes a roadmap to compliance with guidance for current and future improvements

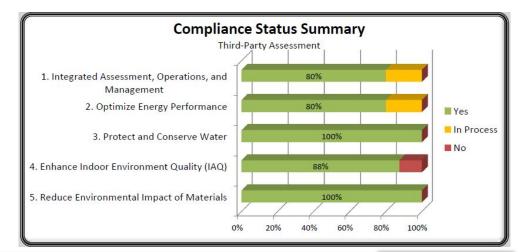


GPC Third-Party Final Report



- Provides the final GPC Score and Rating
- Graphs, charts, and data clarify details of compliance
- Standardized reporting ensures consistency
- Designed for benchmarking across and within agencies
- "Roadmap to compliance" (for GPC EB) outlines what was missed & how to comply







Federal Agency Use



- GPC for existing buildings (GPC EB)
 - More than 250 buildings certified for Veteran's Affairs, Dept. of Energy and USDA
 - Including hospitals, long-term care facilities, outpatient clinics, warehouses, support buildings and offices both owned and leased
- GPC for New Construction (GPC NC)
 - New program with buildings that are pending certification







Guiding Principles Compliance for New Construction (GPC NC)



GPC Program Overview





1: Employ Integrated Design Principles



2: Optimize Energy Performance



3: Protect and Conserve Water



4: Enhance Indoor Environmental Quality (IAQ)



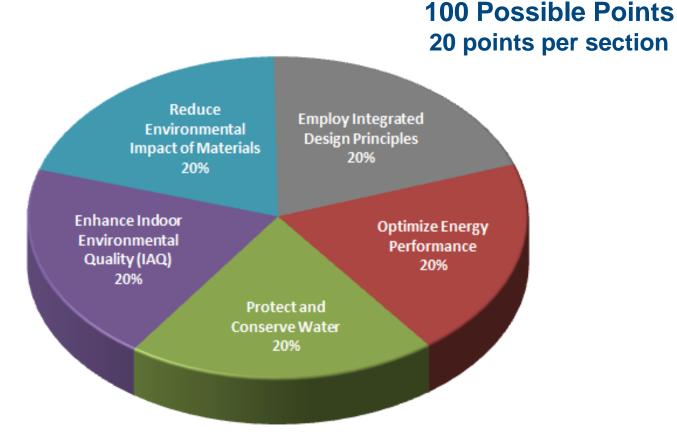


GPC NC Scoring Protocol



Each environmental assessment area is allocated an equal number of points

(individual criteria will vary)







I. Employ Integrated Design Principles

I.A.1	Integrated Design: Integrated Project Team - Initiate and maintain an integral project team as described on the Whole Building Design Guide.
I.A.2	Integrated Design: Business Case - Integrate the use of OMB's A-11, Section 7, Exhibit 300: Capital Asset Plan and Business Case Summary.
I.A.3	Integrated Design: Performance Goals - Establish performance goals for siting, energy, water, materials, and indoor environmental quality along with other comprehensive design goals and ensures incorporation of these goals throughout the design and lifecycle of the building.
I.A.4	Integrated Design: Lifecycle - Consider all stages of the building's lifecycle, including deconstruction.







I. Employ Integrated Design Principles

I.B.1	Commissioning - Employ commissioning practices tailored to the size and complexity
	of the building and its system components in order to verify performance of building
	components and systems and help ensure that design requirements are met. This should
	include an experienced commissioning provider, inclusion of commissioning requirements
	in construction documents, a commissioning plan, verification of installation and
	performance of systems to be commissioned, and a commissioning report





II. Optimize Energy Performance	
II.A.1	Energy Efficiency: Establish a Performance Target - Establish a whole building performance target that takes into account the intended use, occupancy, operations, plug loads, other energy demands, and design to earn the ENERGY STAR® targets for new construction and major renovation where applicable.
II.A.2	 Energy Efficiency: Reduce Energy Use New Construction - For new construction, reduce the energy use by 30 percent compared to the baseline building performance rating per the American National Standards Institute (ANSI)/American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc., (ASHRAE)/Illuminating Engineering Society of North America (IESNA) Standard 90.1-2007, Energy Standard for Buildings Except Low-Rise Residential. Major Renovation - Reduce energy use by 20% compared to the ASHRAE 90.1 2007 baseline building design if design information is available. Laboratory Spaces - Laboratory spaces may use the Labs21 Laboratory Modeling Guidelines.







II. Optimize Energy Performance

II.A.3	Energy Efficiency: Energy Efficient Products - Use ENERGY STAR® and FEMP-designated Energy Efficient Products, where available.
II.B.1	On-Site Renewable Energy: Solar Hot Water Heaters - Per the Energy Independence and Security Act (EISA) Section 523, meet at least 30% of the hot water demand through the installation of solar hot water heaters, when lifecycle cost effective.
II.B.2	On-Site Renewable Energy: Renewable Energy Generation Projects - Per Executive Order 13423, implement renewable energy generation projects on agency property for agency use, when lifecycle cost effective.
II.C.1	Measurement and Verification: Electricity meters - Per the Energy Policy Act of 2005 (EPAct) Section 103, install building level electricity meters in new major construction and renovation projects to track and continuously optimize performance.







II. Optimize Energy Performance

II.C.2	Measurement and Verification: Natural Gas and Steam Meters - Per EISA Section 434, include equivalent meters for natural gas and steam, where natural gas and steam are used.
II.D.1	Benchmarking - Compare actual performance data from the first year of operation with the energy design target, preferably by using ENERGY STAR® Portfolio Manager for building and space types covered by ENERGY STAR®. Verify that the building performance meets or exceeds the design target, or that actual energy use is within 10% of the design energy budget for all other building types. For other building and space types, use an equivalent benchmarking tool such as the Labs21 benchmarking tool for laboratory buildings.





III. Protect and Conserve Water

III.A.1	Indoor Water: Potable Water Use - Employ strategies that in aggregate use a minimum of 20 percent less potable water than the indoor water use baseline calculated for the building, after meeting the EPAct 1992, Uniform Plumbing Codes 2006, and the International Plumbing Codes 2006 fixture performance requirements.
III.A.2	Indoor Water: Indoor Water Meters - The installation of water meters is encouraged to allow for the management of water use during occupancy.
III.A.3	Indoor Water: Alternative Sources of Water - The use of harvested rainwater, treated wastewater, and air conditioner condensate should also be considered and used where feasible for nonpotable use and potable use where allowed.





III. Protect and Conserve Water

III.B.1	Outdoor Water: Water Efficient Landscape and Irrigation - Use water efficient landscape and irrigation strategies, such as water reuse, recycling, and the use of harvested rainwater, to reduce outdoor potable water consumption by a minimum of 50 percent over that consumed by conventional means (plant species and plant densities).
III.B.2	Outdoor Water: Outdoor Water Meters - The installation of water meters for locations with significant outdoor water use is encouraged.
III.B.3	Outdoor Water: Storm Water Runoff - Employ design and construction strategies that reduce storm water runoff and discharges of polluted water offsite.
III.B.4	Outdoor Water: Site Hydrology - Per EISA Section 438, to the maximum extent technically feasible, maintain or restore the predevelopment hydrology of the site with regard to temperature, rate, volume, and duration of flow using site planning, design, construction, and maintenance strategies.





III. Protect and Conserve Water

III.C.1	Process Water - Per the Energy Policy Act of 2005 Section 109, when potable water is used to improve a building's energy efficiency, deploy lifecycle cost effective water conservation measures.
III.D.1	Water Efficient Products: WaterSense Products - Specify EPA's WaterSense- labeled products or other conserving products, where available.
III.D.2	Water Efficient Products: Irrigation Contractors - Choose irrigation contractors who are certified through a WaterSense labeled program.





IV. Enhance Indoor Environmental Quality

IV.A.1	Ventilation and Thermal Comfort - Meet ASHRAE Standard 55-2004, Thermal Environmental Conditions for Human Occupancy, including continuous humidity control within established ranges per climate zone, and ASHRAE Standard 62.1-2007, Ventilation for Acceptable Indoor Air Quality.
IV.B.1	Moisture Control - Establish and implement a moisture control strategy for controlling moisture flows and condensation to prevent building damage, minimize mold contamination, and reduce health risks related to moisture.
IV.C.1	Daylighting: Daylight Factor - Achieve a minimum daylight factor of 2 percent (excluding all direct sunlight penetration) in 75 percent of all space occupied for critical visual tasks.
IV.C.2	Daylighting: Dimming/Lighting Controls - Provide automatic dimming controls or accessible manual lighting controls, and appropriate glare control.





IV. Enhance Indoor Environmental Quality

IV.D.1	Low-Emitting Materials - Specify materials and products with low pollutant emissions, including composite wood products, adhesives, sealants, interior paints and finishes, carpet systems, and furnishings.
IV.E.1	Protect Indoor Air Quality during Construction: Indoor Air Quality Guidelines - Follow the recommended approach of the Sheet Metal and Air Conditioning Contractor's National Association Indoor Air Quality Guidelines for Occupied Buildings under Construction, 2007.
IV.E.2	Protect Indoor Air Quality during Construction: 72-Hour Flush-Out - After construction and prior to occupancy, conduct a minimum 72-hour flush-out with maximum outdoor air consistent with achieving a relative humidity no greater than 60 percent. After occupancy, continue flush-out as necessary to minimize exposure to contaminants from new building materials.







IV. Enhance Indoor Environmental Quality

IV.F.1	Environmental Tobacco Smoke Control - Implement a policy and post signage
	indicating that smoking is prohibited within the building and within 25 feet of all building
	entrances, operable windows, and building ventilation intakes during building occupancy.







V.A.1	Recycled Content - Per Section 6002 of the Resource Conservation and Recovery Act
	(RCRA), for EPA-designated products, specify products meeting or exceeding EPA's
	recycled content recommendations. For other products, specify materials with recycled
	content when practicable. If EPA-designated products meet performance requirements and
	are available at a reasonable cost, a preference for purchasing them shall be included in all
	solicitations relevant to construction, operation, maintenance of or use in the building. EPA's
	recycled content product designations and recycled content recommendations are available
	on EPA's Comprehensive Procurement Guideline web site at www.epa.gov/cpg .





V.B.1	Biobased Content - Per Section 9002 of the Farm Security and Rural Investment Act (FSRIA), for USDA-designated products, specify products with the highest content level per USDA's biobased content recommendations. For other products, specify biobased products made from rapidly renewable resources and certified sustainable wood products. If these designated products meet performance requirements and are available at a reasonable cost, a preference for purchasing them shall be included in all solicitations relevant to construction, operation, maintenance of or use in the building. USDA's biobased product designations and biobased content recommendations are available on USDA's biobased product designations and
	biobased content recommendations are available on USDA's BioPreferred web site at www.biopreferred.gov .







V.C.1	Environmentally Preferable Products - Use products that have a lesser or
	reduced effect on human health and the environment over their lifecycle when
	compared with competing products or services that serve the same purpose. A
	number of standards and ecolabels are available in the marketplace to assist
	specifiers in making environmentally preferable decisions. For recommendations,
	consult the Federal Green Construction Guide for Specifiers at
	www.wbdg.org/design/greenspec.php.







V.D.1	Waste and Materials Management: Recycling - Incorporate adequate space, equipment, and transport accommodations for recycling in the building design.		
V.D.2	2 Waste and Materials Management: Construction Waste		
	 New Construction - During a project's planning stage, identify local recycling and salvage operations that could process site-related construction and demolition materials. During construction, recycle or salvage at least 50 percent of the non-hazardous construction, demolition and land clearing materials, excluding soil, where markets or onsite recycling opportunities exist. 		
	• Major Renovation - Provide salvage, reuse and recycling services for waste generated from major renovations, where markets or onsite recycling opportunities exist.		





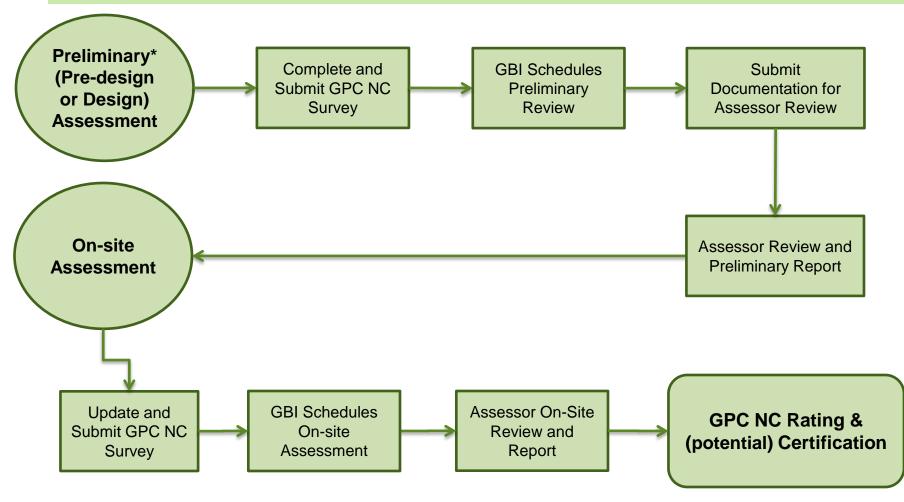


V.E.1	Ozone Depleting Compounds - Eliminate the use of ozone depleting compounds
	during and after construction where alternative environmentally preferable products are
	available, consistent with either the Montreal Protocol and Title VI of the Clean Air Act
	Amendments of 1990, or equivalent overall air quality benefits that take into account lifecycle
	impacts.



GPC NC Process Map





*One preliminary review is included with the assessment. Optional are available for an additional fee



Guiding Principles Compliance GPC NC Process – Estimated Hours



Guiding Principles for New Construction Estimated Hours by Task	Estimated Hours
Project management & client meetings	4 - 12
Gather and assemble data for the GPC NC Survey	6 - 10
Complete GPC NC Survey	2 - 8
Prepare documentation package for the assessor for preliminary review (Pre-design or Design)	4 - 10
Prepare documentation package for the assessor for On-Site review	3 - 6
Plan and attend the On-Site assessment	4 - 12
Post assessment action items (review report and share results)	4 - 8
Recognition	1
Total Estimated Hours	28 - 67





GPC NC Survey & Document Checklist

#	GP	GG NC Criteria		Select Your Answer	Enter Supporting Documentation & Comments	
IV.F	Environmental Tobacco Smoke Control Implement a policy and post signage indicating that smoking is prohibited within the building and within 25 feet of all building entrances, operable windows, and building ventilation intakes during building occupancy.			Yes	Tobacco Smoke Control policy, as well as map with locations of "No Smoking" signage in and near all building enterances.	
		If "In Pro	ocess," how many points?			
	as applicable Requirement conditional Required as applicable 3.7.2.9.1 Smoking Policy X 3.7.2.9.2 Smoking Signage X					
	 3.7.2.9.1 Smoking Policy Is there a construction management policy to prohibit smoking in the building and a provision to require that smoking be a minimum of 25 feet from the building with posted signage? 3.7.2.9.2 Smoking Signage Is there a requirement to post "No Smoking" signage in the building and near all building entrances and air intakes? 			ToolTip: The Tobacco Smoke Control policy should be included in the Pre-Design Assessment documentation. This policy can be included as a subsection of the IAQ Management policy. Signage should be posted to ensure that smoke is kept at least 25 feet away from building entrances, operable windows and outdoor air intakes for the building's HVAC system. For the Pre-Design Assessment, provide the assessor with approximate location of signage in revelation to doors, windows, and intake louvers.		
				Yes		





GPC NC Survey & Document Checklist

Employ Integrated Design Principles		Answer
I.A.1 Integrated Project Team	- Click to go there	Yes
I.A.2 Business Case	- Click to go there	In Process
I.A.3 Performance Goals	- Click to go there	Yes
I.A.4 Lifecycle	- Click to go there	Not assessed
I.B Commissioning	- Click to go there	No

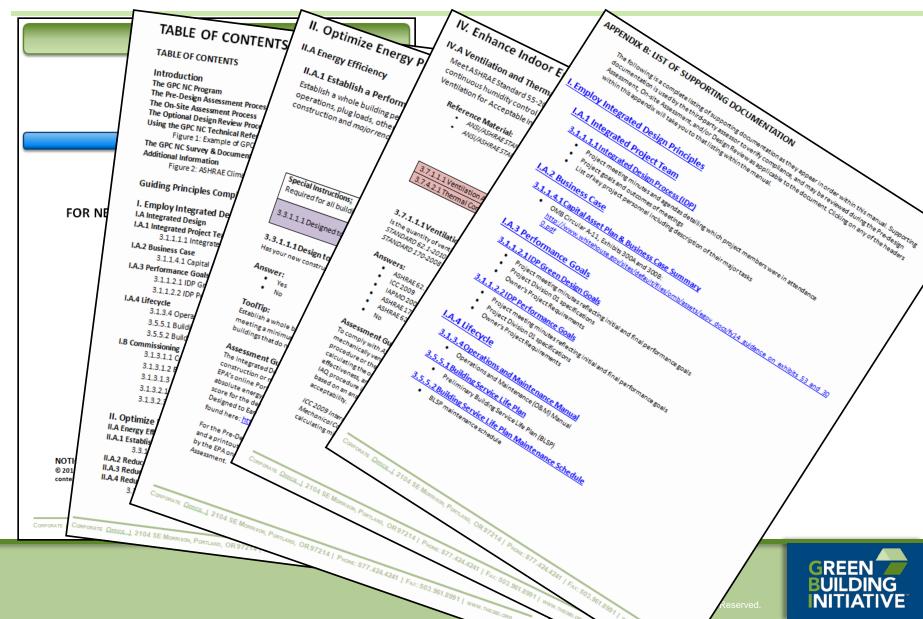
Optimize Energy Performance		Answer
II.A.1 Establish a Performance Target	- Click to go there	Yes
II.A.2 Reduce Energy Use - New Construction	- Click to go there	Not assessed
II.A.3 Reduce Energy Use - Major Renovation	- Click to go there	N/A
II.A.4 Reduce Energy Use - Laboratory Spaces	- Click to go there	N/A
II.A.5 Energy Efficient Products	- Click to go there	In Process
II.B.1 Solar Hot Water Heaters	- Click to go there	In Process
II.B.2 Renewable Energy Generation Projects	- Click to go there	No
II.C.1 Electricity Meters	- Click to go there	Yes
II.C.2 Natural Gas and Steam Meters	- Click to go there	In Process
II.D Benchmarking	- Click to go there	In Process

Click on any blue link to jump to that spot in the survey.





GPC NC Technical Reference Manual







Guiding Principles Compliance for Existing Buildings (GPC EB)



GPC Program Overview

GPC EB Assessment Areas





- 1. Employ Integrated Assessment, Operation, and Management Principles
- 2. Optimize Energy Performance
- 3. Protect and Conserve Water
- 4. Enhance Indoor Environmental Quality
- 5. Reduce Environmental Impact of Materials



GPC EB Scoring Protocol



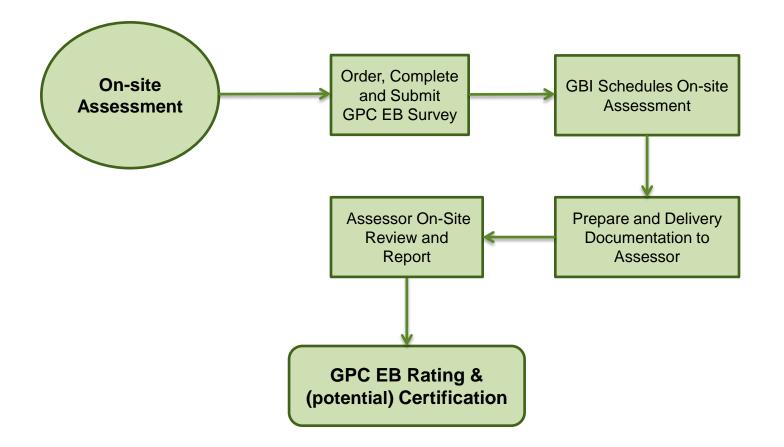
Each environmental assessment area is allocated an equal number of points (individual criteria will vary)

100 Possible Points 20 points per section **Employ Integrated** Reduce Assessment, Environmental **Operation and** Impact of Materials Management Principles 20% 20% **Enhance Indoor Optimize Energy** Environmental Performance Quality (IAQ) 20% 20% Protect and Conserve Water 20%











©2014 Green Building Initiative. All Right Reserved.

compliance.

-

GPC EB Survey





Tool-tips for assessment guidance

Replicate campus-wide data for multiple buildings

1.1.1 Integrated Assessment, Operation, and Management (1)

1.1.1.1 (Integrated 1) Use a collaborative, integrated design and planning process with a dedicated, integrated design and planning process with a dedicated, integrated team to develop and implement policy regarding sustainable operations and maintenance in all stages of a project.

Compliance Status: Yes

Select the verification documentation and/or action that supports the claimed compliance status

Status Verification: Please verify compliance with one of the following options...

Enter comments and/or th Please verify compliance with one of the following options... A documented, integrated design and planning process (4 points) Other Comments/[^A written policy is in development (2 points)

Other compliance document (enter document/comments below)

Assessors Only

Does other documentation (if selected) qualify for compliance? Select one (if applicable)...

If so, how many points?





GBI's Survey provides a

simple way to assess for



GPC EB Report: Roadmap to Compliance



- Lists all points missed in the Survey
- > Organizes compliance recommendations by individual criteria
- Allows you to focus on where and how to comply with the Guiding Principles

#3: PROTECT AND CONSERVE WATER

Total Points Scored:12Total Points Missed:8Environmental Assessment Area Rating: 60%

Roadmap to Compliance:

- 3.2 Outdoor Water: The times of sprinkler operation should be recorded so that an accurate estimate can be developed of water consumption. The actual quantities can be compared to a baseline water level developed from a variety of water calculation programs such as Watergy. Once the initial water usage has been estimated, a plan can be developed to continue to track performance and reduce the potable water for irrigation.
 - Missed points: 5
- 3.4 Water Efficient Products: A written command instruction should be developed that establishes a purchasing
 policy that all applicable equipment should be rated as water efficient. Additionally, a procurement report
 should be developed that tracks the purchases and readily provides information on compliance with this
 procedure.
 - Missed points: 3





Guiding Principles Compliance Professional[™] (GPCP)

 Certification program for qualified individuals to become expert facilitators of the Guiding Principles Compliance assessment program





GPC Program Benefits





An integrated program offering surveys, instructions, training, and GBI customer support.



A detailed assessment methodology ensuring clear and consistent awarding of points for compliance.

Standardized reports that clarify the details of compliance and overall level of compliance for each building.

Assessment results are based on an actual site visit and documentation review by a sustainability expert. Third-party assessment/ certification ensures objective, credible, and accurate reporting of compliance. A rating system with 4 categories (levels) of compliance for benchmarking. Verifiable evidence of compliance: GBI provides a detailed third partyassessment report, and score/rating certificate.



Getting Started



- Select a building
- Contact GBI to discuss your project
- Create your GBI account
- Complete and submit a Quote Request Form online
- Receive your formal pricing quote
- Place your order





Contact GBI:

Mark Lesher mark@thegbi.org 503.274.0448 Ext. 102



©2014 Green Building Initiative. All Right Reserved.