



SECTION 6

Green Globes NC Program

LEARNING OBJECTIVES

- Describe the features and eligibility for the Green Globes for New Construction (NC) program.
- Explain the Environmental Assessment Areas.
- Understand the assessment process.

Green Globes for New Construction is used to assess and certify ground-up newly constructed buildings as well as additions and major renovations of existing buildings. It guides the integrated design process through each phase of a new building project and measures intended performance.

Program Features

SURVEYS

Green Globes for New Construction includes four online surveys:

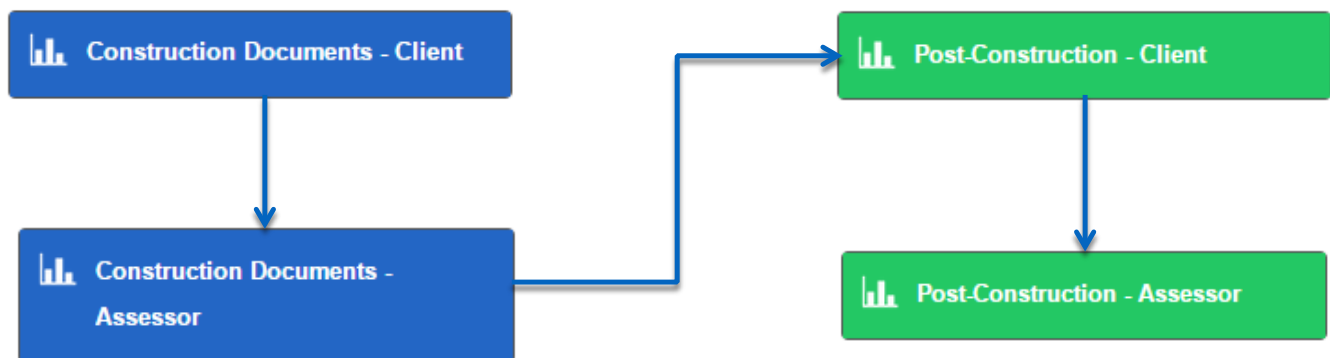
- Pre-Design
- Schematic Design
- Construction Documents
- Post Construction

The first two surveys, Pre-Design (PD) and Schematic Design (SD), are optional and are not scored. They are designed to help project teams early in the construction process understand the Green Globes assessment requirements.

The next two surveys, Construction Documents (CD), and Post Construction (PC) are identical. Unlike the Pre-Design and Schematic Design surveys, they are scored and required as part of the assessment process. Each has two versions that are retained part of the project record; one for the client and one for the assessor.

Information Flow

Information flows between survey versions during the assessment process as indicated in the diagram below. This automatic population saves time for both the user and assessor, as only responses that have changed from the prior submission require updates. Only one survey is editable at any given time.



Once the user completes and submits the Construction Documents survey, GBI releases the assessor's version of the survey. The client Construction Documents survey responses flow to the assessor's version. Once submitted, the user has view access only, and the assessor has access to make updates.

After the assessor completes and submits the Construction Documents survey, GBI will release the client Post Construction survey (it will not be visible until then). The assessor Construction Documents responses flow

to the client Post Construction survey. Once released, the assessor has view only access, and the user can make updates.

The completion and submission of the Post Construction surveys works the same as the Construction Documents surveys.

Pre-Design Survey (PD)

The Pre-Design survey includes questions about the project scope such as building functional requirements and developer commitments, intentions, and objectives. As previously mentioned, the Pre-Design survey is not scored nor is completion required for certification. However, if teams register their project in the early stages it is strongly encouraged to complete this survey in order to maximize the benefits of the Green Globes assessment process.

The screenshot displays the 'Pre-Design' survey interface. At the top, there's a header with a 'Pre-Design' icon and a '12% COMPLETION' progress indicator. Below the header, a breadcrumb trail reads 'Projects / Test Project GGP Training / Pre-Design'. The left sidebar contains several navigation buttons: 'Basic Information', 'Pre-Design' (selected), 'PRINTABLE BLANK SURVEY', 'PROJECT MANAGEMENT', 'Integrated Design Process', 'Environmental Management During Construction', 'Commissioning', 'SITE', 'ENERGY', 'WATER', 'MATERIALS & RESOURCES', 'EMISSIONS', 'INDOOR ENVIRONMENT', 'SURVEY COMPLETION', 'PRINTABLE SURVEY WITH RESPONSES', 'Schematic Design', 'Construction Documents - Client', and 'Construction Documents - Assessor'. The main content area shows a status message: 'This project is currently in progress. Basic Information and data for the Pre-Design and Schematic Design phases may be updated.' Below this, the 'INTEGRATED DESIGN PROCESS (IDP)' section is visible, followed by 'Pre-Design Meetings'. A table lists various disciplines involved in the project, each with a 'Yes' or 'No' radio button option.

Pre-Design Meetings	
XXXX1 Will the integrated design process (IDP) include a minimum of five of the key design disciplines involved in the project: (check as many as apply)	
XXXX1 • Architect?	☒ Yes ☐ No
XXXX2 • Building Science or Building Forensics Expert?	☐ Yes ☐ No
XXXX3 • Civil Engineer?	☒ Yes ☐ No
XXXX4 • Commissioning Agent?	☒ Yes ☐ No
XXXX5 • Community Representative(s)?	☐ Yes ☐ No
XXXX6 • Contractor?	☒ Yes ☐ No
XXXX7 • Electrical Engineer?	☒ Yes ☐ No
XXXX8 • Energy Engineer?	☐ Yes ☐ No
XXXX9 • Facilities Manager?	☐ Yes ☐ No
XXXX10 • Interior Designer?	☐ Yes ☐ No
XXXX11 • Landscape Architect?	☒ Yes ☐ No

Schematic Design Survey (SD)

When the Pre-Design phase is complete, the building project progresses to the Schematic Design phase and corresponding Green Globes survey in which users will answer questions regarding owner requirements, project goals and strategies, energy modeling, and the integrated design process. As with the Pre-Design survey, the Schematic Design survey is not scored, and completion is recommended but not required for certification.

Schematic Design

Project Management: Integrated Design Process

Projects / Test Project GGP Training / Schematic Design

Basic Information

Pre-Design

Schematic Design

PRINTABLE BLANK SURVEY

PROJECT MANAGEMENT

Integrated Design Process

Commissioning

SITE

ENERGY

WATER

MATERIALS & RESOURCES

EMISSIONS

INDOOR ENVIRONMENT

SURVEY COMPLETION

PRINTABLE SURVEY WITH RESPONSES

This project is currently in progress. Basic Information and data for the Pre-Design and Schematic Design phases may be updated.

INTEGRATED DESIGN PROCESS (IDP)

Pre-Design Meetings

2.1.1.1 Is an integrated design (IDP) process being employed, which includes a minimum of five of the key design disciplines involved in the project? (check as many as apply)	☐ Yes ☐ No
2.1.1.1.1 • Architect?	☐ Yes ☐ No
2.1.1.1.2 • Building Science or Building Forensics Expert?	☐ Yes ☐ No
2.1.1.1.3 • Civil Engineer?	☐ Yes ☐ No
2.1.1.1.4 • Commissioning Agent?	☐ Yes ☐ No
2.1.1.1.5 • Community Representative(s)?	☐ Yes ☐ No
2.1.1.1.6 • Contractor?	☐ Yes ☐ No

Construction Documents Survey (CD)

The next phase in the building project is the production of a detailed set of construction documents (CD's). This phase corresponds with the Construction Documents (CD) survey, completion of which is required for Green Globes certification. Criteria within this survey are allocated specific point values according to the response provided (Yes, No, N/A, or a threshold value). Some criteria have alternate routes to achieve points. These routes are labeled as paths. Where paths exist, points are awarded for a single path. They are mutually exclusive; you cannot mix and match criteria to combine points between path options.

The user must select “Save & Continue” at the bottom of each page to save responses and advance to the next page.

The Green Globes online system is interactive and automatically calculates the projected Green Globes score based upon the entered responses to the Construction Documents survey questions. Each time the user saves, the projected score updates accordingly. The system also indicates what percentage of the survey has been completed depending upon the total number of questions answered and saved. Moreover, many of the criteria are accompanied by helpful “ToolTips” that provide guidance, additional information, or a detailed explanation for the criterion. ToolTips can be viewed by hovering your cursor over a criteria number. In addition, all ToolTips as well as supplemental guidance can be found in the [Green Globes for New Construction Technical Reference Manual](#), which is available for download from the GBI website.

[Score and Progress](#)

[ToolTip](#)

The screenshot shows the 'Construction Documents - Client' survey interface for 'Energy: Energy Performance'. The top right corner displays two circular progress indicators: a green circle for '100% COMPLETION' and a blue circle for '68% SCORE'. A red arrow points from the 'Score and Progress' link to these indicators. The main content area shows the survey progress and the survey questions. A red arrow points from the 'ToolTip' link to a tooltip box that provides additional information about the survey questions.

Construction Documents - Client
Energy: Energy Performance

100% COMPLETION 68% SCORE

Projects / Test Project GGP Training / Construction Documents - Client

Basic Information
Pre-Design
Schematic Design
Construction Documents - Client
PRINTABLE BLANK SURVEY
PROJECT MANAGEMENT
SITE
ENERGY
Energy Performance
Energy Demand
Measurement and Verification
Building Opaque Envelope
Lighting
HVAC Systems and Controls
Other HVAC Systems
Other Equipment and Systems
Renewable Energy
Energy Efficient Transportation
WATER
MATERIALS & RESOURCES
EMISSIONS
INDOOR ENVIRONMENT
SURVEY COMPLETION
PRINTABLE SURVEY WITH SCORES

This survey is currently in completed status.
You may view the data, but cannot update it.

ENERGY PERFORMANCE

Assessing Energy Performance

Green Globes provides four paths for assessing energy performance:

- Path A: ENERGY STAR Target Finder - 100 points
- Path B: ANSI/ASHRAE/IESNA Standard 90.1-2010, Appendix G - 100 points
- Path C: Building Carbon Dioxide Equivalent (CO₂e) Emissions (ANSI/GBI Standard 01-2010) - 100 points
- Path D: ASHRAE Building Energy Quotient (bEQ) - 100 points

Points cannot be combined between Paths. Please review and select one of the four pathways below.

Input the energy performance by responding to ONE of the following:

☐ Path A: ENERGY STAR Target Finder

3.3.1.1.1 Input the energy performance as the ENERGY STAR percentile score derived from the Target Finder program.

Tip
Points are awarded on a scale based on the ENERGY STAR energy performance score of 75%-100%. For those buildings that do not conform to ENERGY STAR Award program occupancy types, please complete one of the other Energy Performance Paths.

References:
Green Globes for New Construction Technical Reference Manual, Section 3.3.1.1.1

☐ Path C: Building Carbon Dioxide Equivalent (CO₂e) Emissions (ANSI/GBI Standard 01-2010)

3.3.1.1.1 Input the energy performance as a reduction of Carbon Dioxide Equivalent (CO₂e) Emissions based on the ANSI/GBI Standard 01-2010 Energy Performance Building Carbon Dioxide Equivalent (CO₂e) Emissions protocol.

Post Construction Survey (PC)

As previously mentioned, the Construction Documents survey and Post Construction survey within Green Globes NC are identical. However, the former is used by the assessor to perform the Stage I Design Review whereas the Post Construction survey is used to perform the Stage II On-Site Assessment after building

construction and commissioning are complete. The Post Construction survey should be updated with any items that may have changed during the construction process due to modifications to the budget, design, owner requirements, etc., or assessor recommendations that were implemented.

PROJECTS PAGE

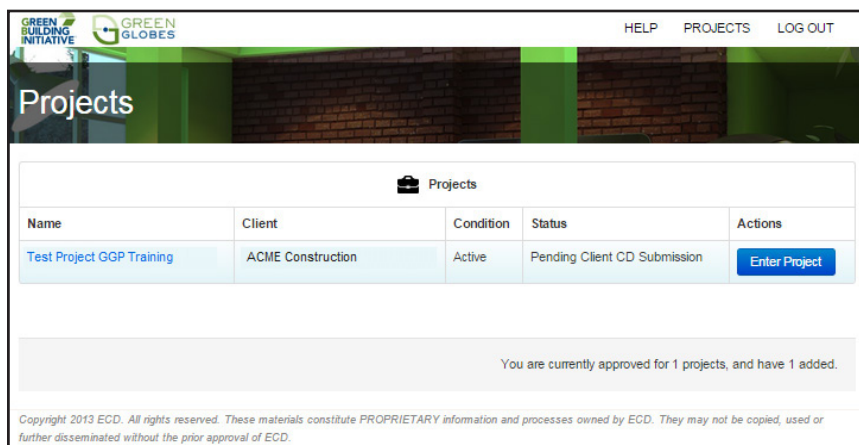
After payment is received for the project registration, users have the ability to access the online surveys and connect a project name. Once the project name is added, users can access their Projects Page. This page includes the following:

Project Name

Client Name

Project Condition

- **Active** - the project is pending completion of the assessment process. The online survey is accessible for edits by the authorized group depending upon project status.
- **Completed** - project assessment process complete. The evaluations are accessible to view, but no edits are allowed.



Name	Client	Condition	Status	Actions
Test Project GGP Training	ACME Construction	Active	Pending Client CD Submission	Enter Project

You are currently approved for 1 projects, and have 1 added.

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Project Status

There are 10 status types that describe the status of the questionnaire.

1. **Pending Client CD Submission:** This is the default status for all projects. The Construction Documents–Client survey is still in process and the client must complete and submit the survey to GBI for review before progressing to the next step of the assessment process. The client has access to edit and submit the Construction Documents–Client survey.
2. **Scheduling Stage I Assessment:** The client has completed and submitted the Construction Documents–Client survey to GBI for review. GBI will confirm with the client that the survey and documentation are ready for assessor review before assigning a third-party Green Globes Assessor to the project and scheduling the Stage I review. The client has access to view the Construction Documents–Client survey but can no longer make edits.
3. **Stage I Assessment:** GBI has assigned a Green Globes Assessor to the project and released the Construction Documents–Assessor survey, which has been populated with the client’s responses from the Construction Documents–Client survey. The assessor will be in contact with the client to discuss the timing and method of delivery for required documentation. When documentation is received, the assessor completes the Design Review, which includes updating the Construction Documents–Assessor survey with his/her findings and writing the assessment report. The client has access to view the assessor’s survey but cannot make any edits.
4. **Stage I Report Review:** The third-party assessor has submitted the Construction Documents–Assessor survey and Stage I Report to GBI for review. The client has access to view the assessor’s survey but

cannot make any edits.

5. Pending Client Post Construction survey Submission: GBI has reviewed and issued the Stage I report to the client and provided the client access to the Post Construction-Client survey. This survey contains all responses from the Construction Documents-Assessor survey. The client will review the Post Construction-Client survey and make updates in accordance with final building construction and submit the completed survey to GBI for review.
6. Scheduling Stage II Assessment: The client has completed the Post Construction-Client survey and submitted it to GBI for review. GBI will contact the client to formally schedule the final assessment. The client has access to view the Post Construction-Client survey but can no longer make edits.
7. Stage II Assessment: GBI has scheduled the final assessment. The assigned assessor has performed or is about to perform the assessment, after which he/she will update the Post Construction-Assessor survey and write the final report containing the recommended score and rating. The client has access to view the assessor's survey but cannot make any edits.
8. Stage II Report Review: The third-party assessor has submitted the Post Construction-Assessor survey and final report to GBI for review. The client has access to view the assessor's survey but cannot make any edits.
9. Certified: The assessment is complete, and the project has met the minimum requirements for Green Globes certification. The evaluations are accessible to view, but no edits are allowed.
10. Verified: The assessment is complete, but the project did not meet the 35 minimum requirements for Green Globes certification. The evaluations are accessible to view, but no edits are allowed.

Enter Project

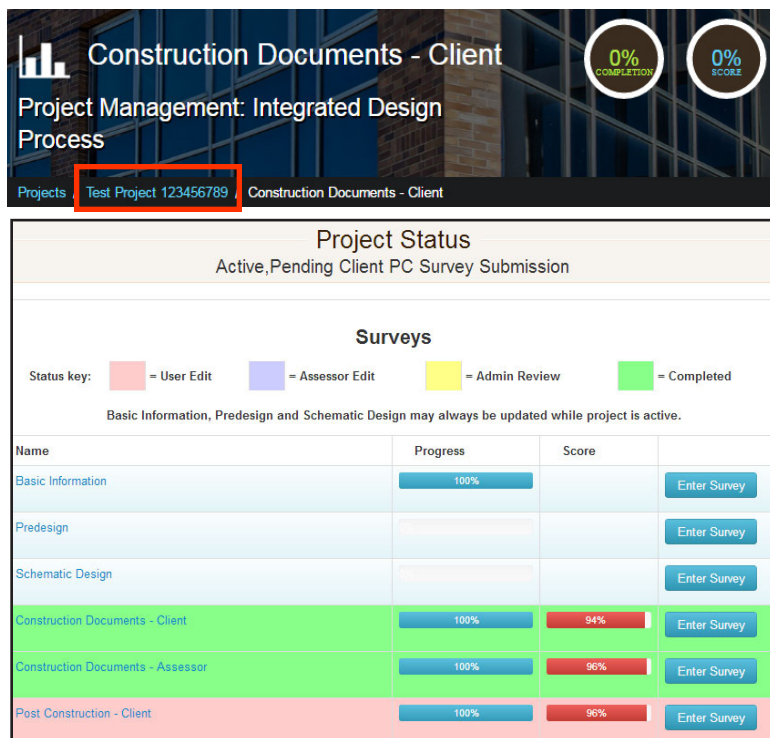
From this screen, when you select “Enter Project” you will move to the Project Dashboard.

PROJECT DASHBOARD

Each NC project in the Green Globes online system has its own Project Dashboard, which can be accessed by clicking on “Enter Project” from the Green Globes NC Projects Page. If you're within a survey, you can access the Project Dashboard by clicking on your project name in the black header near the top of the page.

From the Project Dashboard, you can access the Basic Building Information as well as the surveys. (Please note that the Post Construction survey will not be available until after the Stage I third-party assessment is complete.)

The dashboard also provides a progress tracker to display the percentage of questions complete as well as the projected score for the



NAVIGATION

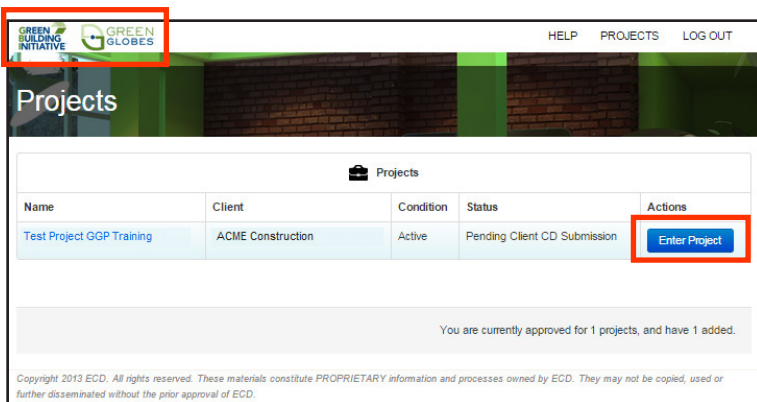
Left Navigation

The left sidebar allows you to jump between surveys, assessment areas and their corresponding sections.

Logo Links

At the top of every page is GBI and Green Globes logos. Clicking on the either will take you to our website, www.thegbi.org.

Selecting Projects on the top right will link to the Project Page.

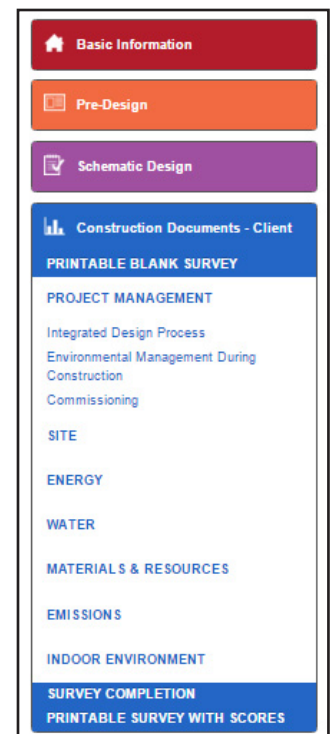


Projects

Name	Client	Condition	Status	Actions
Test Project GGP Training	ACME Construction	Active	Pending Client CD Submission	Enter Project

You are currently approved for 1 projects, and have 1 added.

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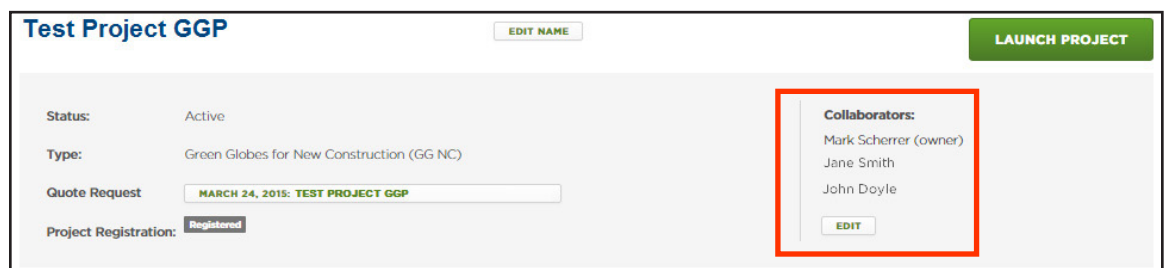


- Basic Information
- Pre-Design
- Schematic Design
- Construction Documents - Client
- PRINTABLE BLANK SURVEY
- PROJECT MANAGEMENT
 - Integrated Design Process
 - Environmental Management During Construction
 - Commissioning
- SITE
- ENERGY
- WATER
- MATERIALS & RESOURCES
- EMISSIONS
- INDOOR ENVIRONMENT
- SURVEY COMPLETION
- PRINTABLE SURVEY WITH SCORES

COLLABORATION

The surveys within the NC program are designed to be complete by the Integrated Design Team. As a result, GBI created the opportunity for the project owner to

provide access to team members within their own GBI Account to complete the responses for their assigned area. You can view who has been assigned collaborator access. The individual from whose account the project was ordered will show as the project owner, all others who have been granted collaborator access will show beneath the owner. It is important that a single user is in the same section of the survey making updates at any given time to minimize the chance users are erroneously overwriting responses.



Test Project GGP

EDIT NAME

LAUNCH PROJECT

Status: Active

Type: Green Globes for New Construction (GG NC)

Quote Request: MARCH 24, 2015: TEST PROJECT GGP

Project Registration: Registered

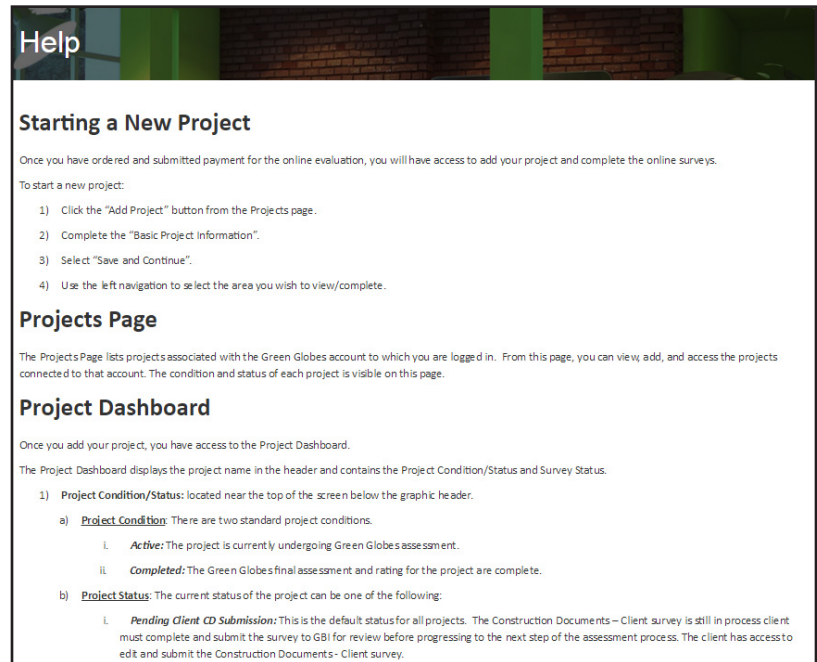
Collaborators:

- Mark Scherrer (owner)
- Jane Smith
- John Doyle

EDIT

HELP PAGE

At the top of every page is a link to the Help Page. This page includes information regarding how to start a new project, complete the survey as well as the definitions for items within the Project Dashboard.



Eligibility Guidance

A building that typically undergoes assessment under the NC program has the following characteristics:

- Is located in the U.S. or within a U.S. Territory.
- Is at least 400 gross square feet.
- Has been occupied no more than 18 months at the time the assessment is ordered. (Building occupied longer than 18 months should undergo Green Globes assessment for existing buildings.)
- Is a permanent enclosed structure.
- Has a contiguous project boundary and its site.
- Is typically designed for human occupancy with HVAC and water.

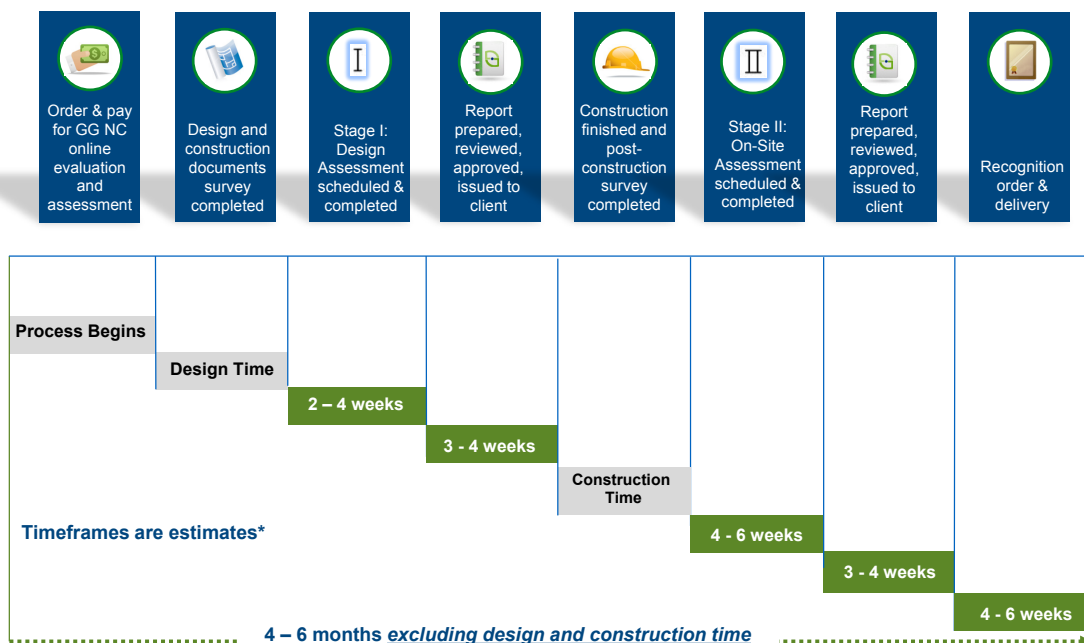
More details regarding eligibility can be found in the [Green Globes Building Eligibility Guidance](#) document located in the Training & Resources\User Resources\Downloads link on GBI website.

Tasks & Estimated Time Commitments

Although the time line of each Green Globes NC assessment and certification project is unique, the entire process generally can be completed in 4-6 months (excluding construction time). The certification time line is largely dependent upon the client in regards to the availability of building information and the organization of Construction Documents and other supporting documentation.

The Green Globes NC process was specifically developed to coincide with the traditional phases of building

design, construction, and commissioning. It emphasizes an integrated design process that enables project teams to focus on sustainability early on, giving them options when considering various sustainable measures and allowing them to evaluate and rate the benefits of different design scenarios. By receiving feedback from Green Globes before critical and final decisions are made, design teams can maximize time and cost savings opportunities.



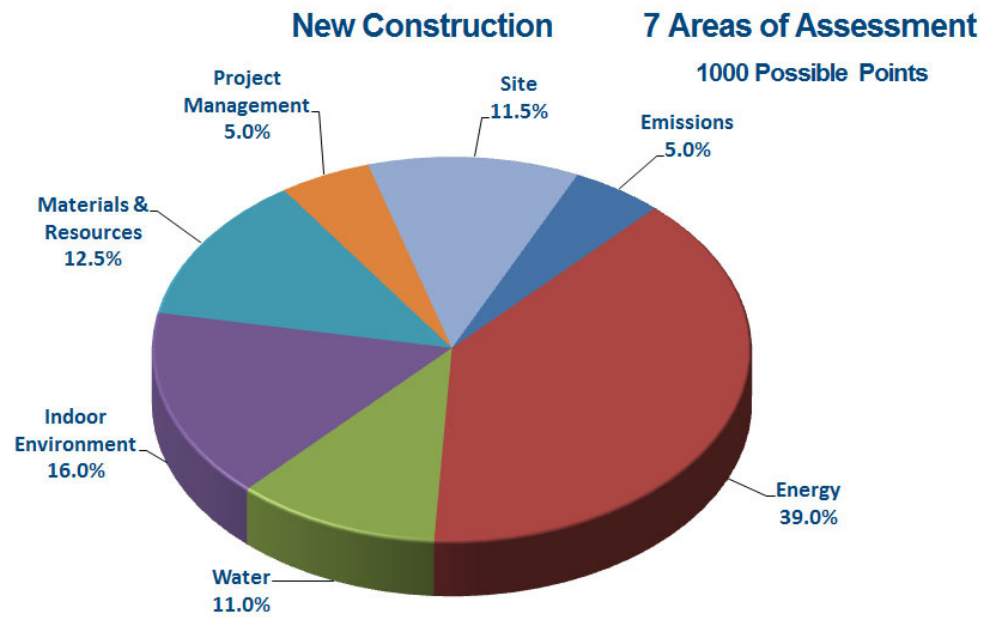
The table below lists the specific tasks GGPs may perform when taking a building through the Green Globes NC process. Before the project begins, the client and the GGP agree to the scope of services to be provided, and GGPs provide an estimate of the number of work-hours required to complete that scope of work. Clients may elect to perform all of the GGP (user) functions themselves, assign part of the project to a GGP, or assign the entire project to the GGP.

The table below presents a range of work-hours for a typical 100,000 square foot office building where the role of the GGP is that of a “Green Facilitator.” However, the number of hours required can vary greatly depending on the building size, characteristics and complexity as well as the level of required documentation readily available from the client. As expert users of Green Globes, GGPs will be able to perform the required project tasks more efficiently than untrained users due to the GGP’s thorough understanding of the process, the criteria, and familiarity with the available tools.

Green Globes Projects Tasks for NC	Estimated Work Hours
Project management & client meetings	8 - 16
Gather and assemble data for the online survey	6 - 10
Complete online surveys	6 - 14
Prepare documentation package for the assessor for Stage I review	12 - 20
Prepare documentation package for the assessor for Stage II review	4 - 14
Plan and attend the Stage II on-site assessment	4 - 12
Post assessment action items (review report and share results)	4 - 8
Recognition	1
Total Hours	45 - 95

Assessment Areas

As previously mentioned, there are 1000 total points possible within Green Globes which are allocated differently for the assessments of projects/buildings under the New Construction, Sustainable Interiors and Existing Buildings programs. The diagram below displays the point distribution for the seven assessment areas within the NC program. Energy has the largest percentage of points followed by Indoor Environment and Materials and Resources.



PROJECT MANAGEMENT

Green Globes addresses management topics as critical aspects of assessment, incorporating them under a major topical section rather than as innovative or extra credit. Sound management practices inevitably lead to positive outcomes. The NC program enhances management concepts by measuring adherence to the incorporation of an integrated design process (IDP), including the use of pre-design and progress meetings as well as the establishment of IDP performance goals. It also incorporates measurement of the use of environmental management during construction which includes the requirement of the General Contractor to utilize and document specific policies, practices, and strategies as part of their Environmental Management Systems (EMS). It also covers clean diesel practices, building materials and envelope that prevent and control mold, and practices to maintain good indoor air quality (IAQ).

SITE

The Site area reviews the development area; urban infill and urban sprawl as well as greenfields, brownfields and floodplains. It covers the ecological impacts including site disturbance and erosion, tree integration and preservation, heat island effect and bird collision prevention. In addition, site criteria deal with stormwater management, landscaping, and exterior light pollution.

ENERGY

As mentioned earlier, within the Energy area there are multiple paths available to measure energy performance. This area addresses, primarily on a prescriptive basis, energy demand, metering, building opaque envelope, HVAC systems and controls, energy efficient equipment, renewable energy including ground source and renewable energy credits, and lastly energy efficient transportation. See Assessment Guidance for multi-residential buildings to determine the path that is most applicable for a multi-unit residential building.

WATER

Green Globe NC addresses water consumption including whole building performance and prescriptively water conserving features, water treatment, alternative sources of water, metering and sub-metering, and irrigation design. Water performance is measured and benchmarked using the GBI Water Calculator as discussed in an earlier section.

MATERIALS & RESOURCES

Green Globes NC separates each building into two categories for materials assessment: Building Assembly (the core, shell, and envelope) and Interior Fit-Out (the interior partitions, finishes, and furnishings used within the Building Assembly). Each of the two categories has two paths for product selection compliance within the Green Globes® online survey: “Path A: Performance Path” which includes full life cycle assessment and “Path B: Prescriptive Path” including industry wide Environmental Product Declarations (EPDs) and third-party certifications based upon a multiple-attribute standard. This area looks at the whole building life cycle including the reuse of existing buildings, and a building life service plan. In addition, the NC program covers construction waste management, and aspects of the envelope; roofing/openings, foundation, waterproofing, cladding and barriers.

EMISSIONS

There are two paths for assessing heating within the NC program; district heating or low emission boilers and furnaces. The cooling section includes review of refrigerants, specifically the ozone depleting potential (ODP), the global warming potential (GWP) and GreenChill best practices regarding leak detection. Emissions also address the storage for hazardous materials.

INDOOR ENVIRONMENT

Within Indoor Environment, Green Globes NC reviews the ventilation; air quality, air exchange intakes and exhausts, source control and the measurement of indoor pollutants including VOCs, fungus, mold, CO₂, tobacco, and radon. Also covered is the use of an integrated pest management strategy, lighting design, as well as thermal and acoustic comfort.

Assessment Guidance

MULTI-USE BUILDINGS

When a building has multiple uses, the criteria may apply differently depending upon the use. For example, a museum with an office space. Daylighting will ruin the artifacts in the museum, but is important in the office space.

How are these situations handled? The assessor will pro-rate the applicable points according to the percentage of building for each occupancy type. If the museum is 90% of the square footage and the office space is 10%, Daylighting would be N/A for 90% of the points. If daylighting is worth 8 points, then 7 points would be N/A and 1 point would be applicable. Point awards are based upon compliance to the criterion, so if they office space has appropriate daylighting to warrant credit, you would be awarded 1 point yielding 100% compliance.

MAJOR RENOVATIONS & ADDITIONS

Major renovations and additions are both handled within the Green Globes for New Construction program; however there are some nuances. Does the assessor compare all building features against the criteria or only the portion that is within the project scope?

In both instances, there are two approaches at the client discretion; however, for credibility reasons, when an approach is selected, it must be used and applied to all criteria within the assessment. The approaches are mutually exclusive:

- Include as applicable the whole building and site regardless of the scope of the major renovation or addition project. This will result in the entire building being certified. The approach is preferred for major renovations.
- Only include as applicable criteria that are relevant to the project scope and essentially only that space will be certified.

MULTI-RESIDENTIAL BUILDINGS

As mentioned in an earlier section, multi-unit residential buildings may use various energy performance paths depending upon the project.

- Path A - ENERGY STAR Target Finder

The ENERGY STAR program is best used to assess energy performance for projects that meet the Target finder criteria. Projects should be mid-size and larger with 20 units or more. This path requires an energy model which provides a single-model demonstration of savings.

- Path B - ASHRAE 90.1-2010, Appendix G

ASHRAE 90.1-2010, Appendix G fits all multi-unit residential projects. This path requires two energy models. (It can be used for energy performance points for projects for low rise 3 stories or less, even though it is not used for code compliance purposes). Proposed model and baseline model requirements may be substituted from ASHRAE 90.2 Section 8 to model buildings that are not included in the scope of ASHRAE 90.1.

- Path C - Building Carbon Dioxide Equivalent CO₂e Emissions (ANSI/GBI 01-2010)

The CO₂e path uses the same criteria as ENERGY STAR Target Finder.

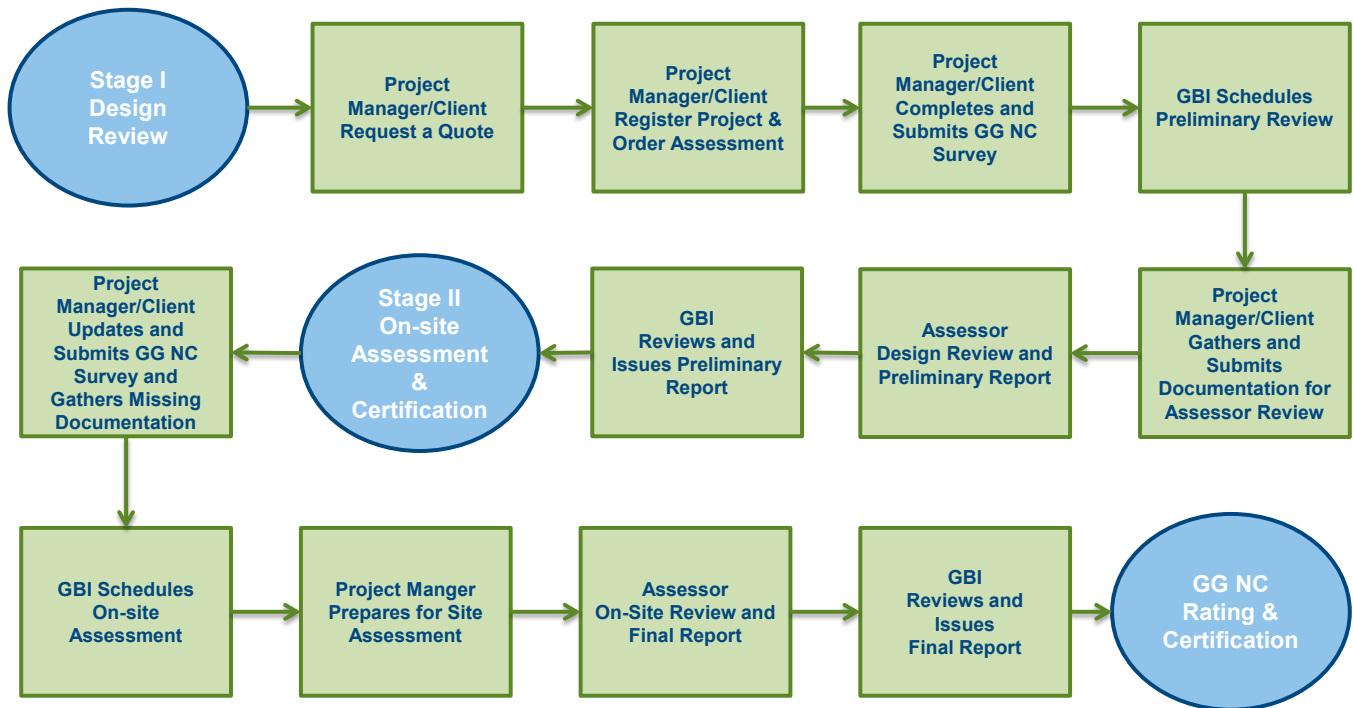
- Path D - ASHRAE Building Energy Quotient (bEQ)

The ASHRAE bEQ method is best used to assess energy performance for buildings that have 5 units or more. Projects may benefit from this path where energy saving strategies exceed the rating scale for Target Finder or Appendix G.

Assessment Process

DESIGN REVIEW AND ON-SITE ASSESSMENT & CERTIFICATION MAP

The Green Globes for New Construction assessment process involves two stages; the Stage I Design Review and the Stage II On-Site Assessment. The process map below provides an overview of the process for both stages. An optional additional preliminary review done at the Pre-Design stage or an additional review done during the Design stage is available for purchase for an additional fee.



REQUEST & VIEW A QUOTE

Every assessment must have a quote which will be used when ordering the assessment.

Create a GBI Account

To request a quote the project manager will need to create a GBI Account. To create an account, follow these steps:

From the GBI website, www.thegbi.org select "Create Account".



Complete the account information.

Create Account

Log In

Required fields

Username: *

Email Address: *

First Name: *

Last Name: *

Company: *

Title:

Read and accept the terms of service. Enter the CAPTCHA and select “Create Account”.

Password: *

Confirm password: *

Terms of service:

WEB SITE USER AGREEMENT

This Terms of Use - Web Site User Agreement (this “Agreement”) is a binding contract between you, on behalf of yourself and, if you are accessing the Site in the course and scope of your employment, on behalf of your employer, and Green Building Initiative, Inc., an Oregon public benefit nonprofit corporation (“GBI”). This Agreement governs your use of the GBI web site (<http://www.thegbi.org>) (the “Site”).

1. Acceptance of Terms.

1.1 Binding Contract. PLEASE READ THIS ENTIRE AGREEMENT. THIS AGREEMENT IS A BINDING CONTRACT BETWEEN YOU, on behalf of yourself and, if you are

Accept terms of service? *

☐

Enter the characters from the picture below

said54

CREATE ACCOUNT

Request a Quote

To request a quote, login to your GBI Account. From the green toolbar, hover over Green Globes Projects and select “Request a Quote”.

Green Globes Projects

Guidin Comp

All Projects

New Construction Projects

Existing Building Projects

Sustainable Interiors Projects

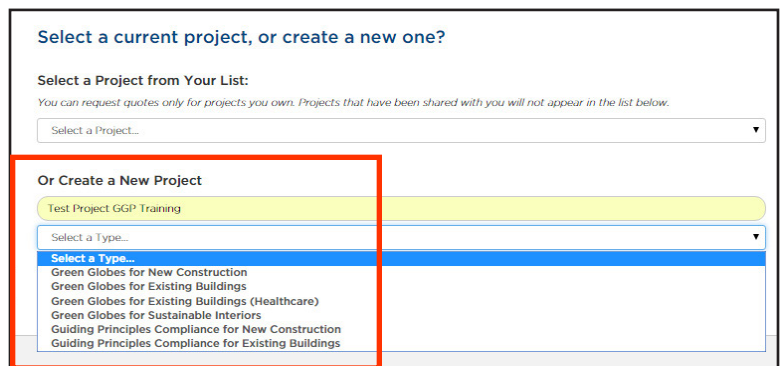
My Quotes

Register a Project

Request A Quote

You can select a previously created project from the drop down list, or create a new one.

If you create a new project, add your project name and select the program type from the drop down list.



Select a current project, or create a new one?

Select a Project from Your List:

You can request quotes only for projects you own. Projects that have been shared with you will not appear in the list below.

Select a Project...

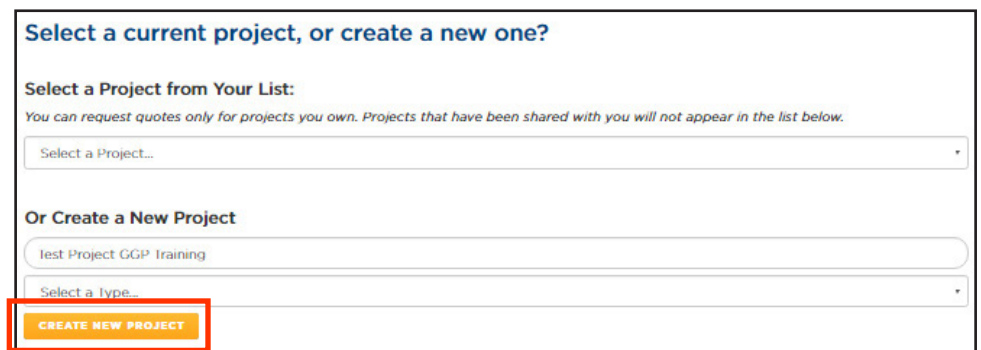
Or Create a New Project

Test Project GGP Training

Select a Type...

- Select a Type
- Green Globes for New Construction
- Green Globes for Existing Buildings
- Green Globes for Existing Buildings (Healthcare)
- Green Globes for Sustainable Interiors
- Guiding Principles Compliance for New Construction
- Guiding Principles Compliance for Existing Buildings

Select "Create New Project".



Select a current project, or create a new one?

Select a Project from Your List:

You can request quotes only for projects you own. Projects that have been shared with you will not appear in the list below.

Select a Project...

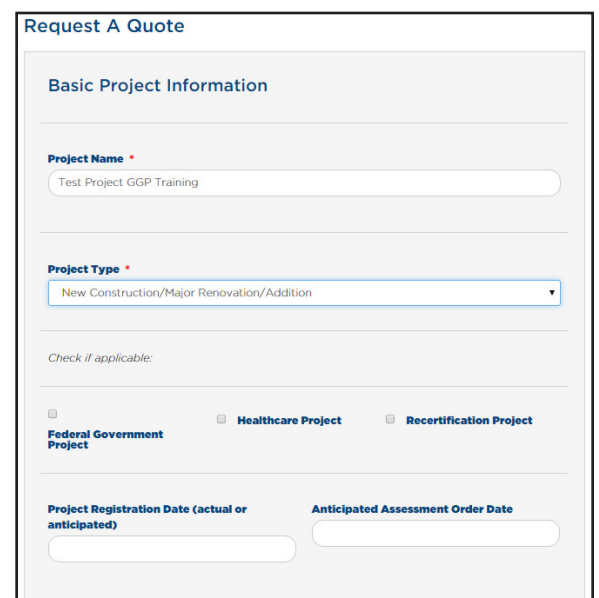
Or Create a New Project

Test Project GGP Training

Select a Type...

CREATE NEW PROJECT

Complete the Quote Form. Please be sure to enter integers only in the square footage field (no commas or periods). Note that Google Chrome seems to work better than Firefox for completing the form.



Request A Quote

Basic Project Information

Project Name *

Test Project GGP Training

Project Type *

New Construction/Major Renovation/Addition

Check if applicable:

☐ Federal Government Project ☐ Healthcare Project ☐ Recertification Project

Project Registration Date (actual or anticipated)

Anticipated Assessment Order Date

When the form is complete, select “Submit Quote Request”.

Building Management Company

Building Manager Name

Building Manager Email

Building Manager Phone

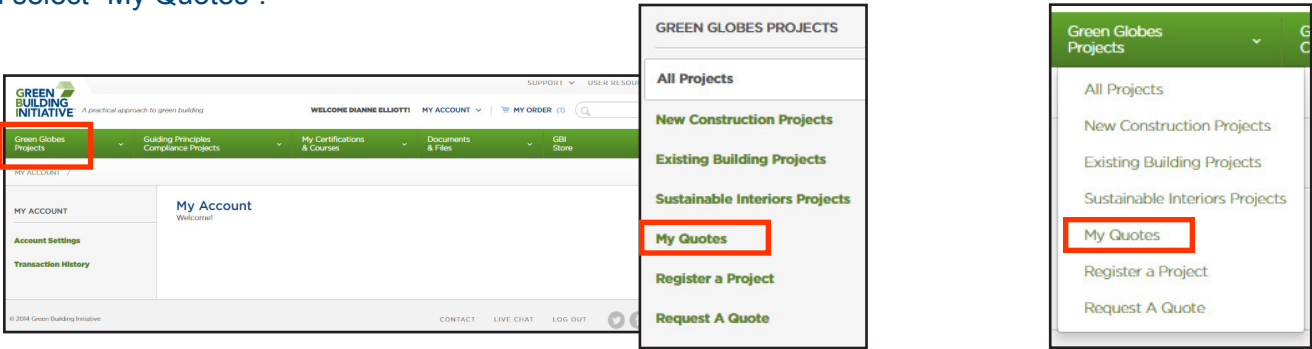
SUBMIT QUOTE REQUEST

Please note that most Green Globes NC clients prefer to order the Stage I Design Assessment and Stage II On-Site Assessment at the same time in order to lock in the current prices. Therefore, all quotes will include both stages unless otherwise requested.

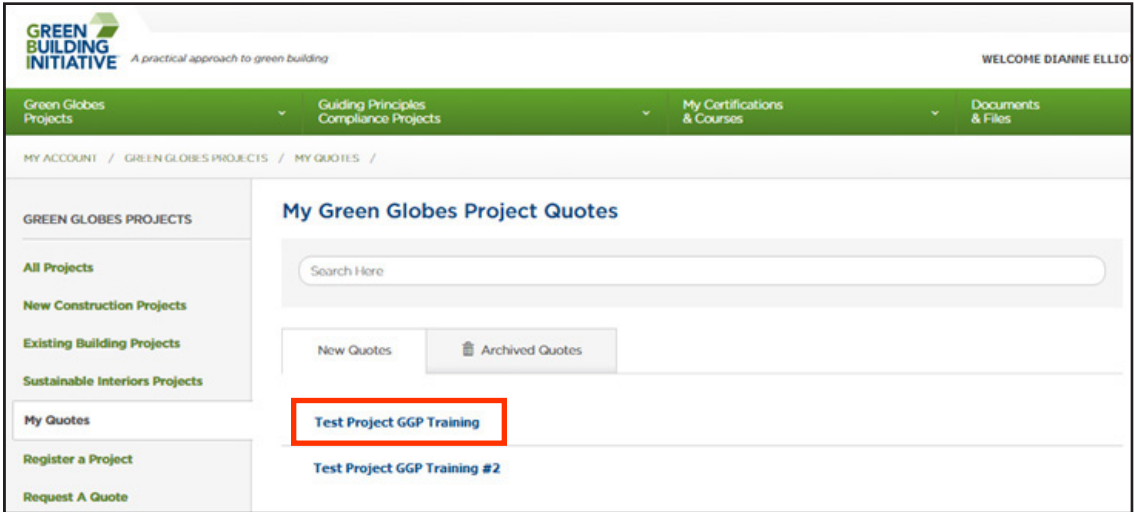
GBI will prepare a formal quote within two business days of receiving the quote request. The quote will be visible from within GBI Account of the person who requested it. In addition, GBI will send the quote in PDF format via email.

View a Quote

To view your quotes, access your GBI Account and select “Green Globes Projects” in the green toolbar. From the left navigation select “My Quotes”. Or you may hover over the Green Globes Projects and from the fly out menu select “My Quotes”.



Select the project from the list for which you wish to view the quote.



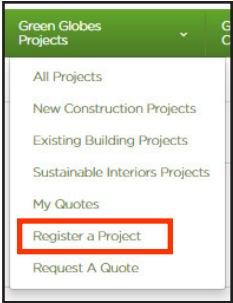
The quote will display.

Quote 58802: Test Project GGP Training		\$12,445.00
Quote Delivered: January 5th, 2016 Quote Expires: May 31st, 2016		
Project Detail:	GGP Test Project, Alexandria VA, 70,000	
Description of Services:	Third-party review of building data provided by the client through the Green Globes online evaluation and building construction documents, third-party on-site assessment to verify building data, third-party final report containing building rating and certification information.	
Qty	Item	Price
1	GG NC Project Registration	\$1,500.00
1	Green Globes NC Design Review & On-Site Assessment	\$8,500.00
1	Assessor Travel (flat fee) Travel charges are paid upfront as a \$1500 flat fee.	\$1,500.00
1	Certification Plaque - Single Building (16x16") Certification plaque is optional.	\$945.00
1	Complimentary CIEB Registration w/ NC Assessment Clients purchasing a Green Globes New Construction third-party assessment are eligible to receive a complimentary subscription to the Green Globes CIEB (15 online evaluations to benchmark building performance, the complimentary subscription is valid for 24 months from the date of NC certification. After 24 months, the subscription will expire and client must pay then-current subscription price to extend the expiration date.	\$0.00
CIEB Project Registration Discount (\$1500 Value - Building Benchmarking)		
Due Next 30 Days		Total Discount: -\$1,500.00
		GRAND TOTAL: \$12,445.00
		PURCHASE NOW

REGISTER A PROJECT

Some clients elect to register their project and submit payment to gain access to the online survey in advance of purchasing an assessment.

If you wish to register a project prior to purchasing an assessment, hover over the Green Globes Projects link in the green toolbar and select “Register a Project”.



From the GBI Store, select “Configure” under the header GG NC Project Registration.

GBI Store		
Project Registration		
GG NC Project Registration	GG SI Project Registration	GG EB Project Registration
\$1,500.00	\$1,500.00	\$1,500.00
CONFIGURE	CONFIGURE	CONFIGURE

Under the Add New Project section, enter the project name and select “Create Project”.

Associate a project with this GG NC Project Registration

Select from your projects

Select from your Green Globes for New Construction (GG NC) projects

Project

test Project GGP Training (Project #548/5)

SELECT PROJECT

OR

Add New Project

Create a new Green Globes for New Construction (GG NC) project

Project Name

CREATE PROJECT

CANCEL

If you have already added your project name but did not complete your project registration, your project name will be in your project list. From the Associate your Project screen under “Select from your projects” section, choose the project from your drop down list and click “Select Project”.

Associate a project with this GG NC Project Registration

Select from your projects

Select from your Green Globes for New Construction (GG NC) projects

Project

test Project GGP Training (Project #548/5)

SELECT PROJECT

OR

Add New Project

Create a new Green Globes for New Construction (GG NC) project

Project Name

CREATE PROJECT

CANCEL

Green Globes Projects

- All Projects
- New Construction Projects**
- Existing Building Projects
- Sustainable Interiors Projects
- My Quotes
- Register a Project
- Request A Quote

An alternative method to select your project is to go to your list of Green Globes projects by hovering over Green Globes Projects in the green toolbar and select “New Construction Projects”.

From your project list, click on the project you wish to register.

Project Name	Project ID	Status	Action
Test Project	#44294	Certified	LAUNCH PROJECT
Test Project GGP Training	#54875	Active	
Test Project GGP Training #2	#55940	Active	

Select “Register Project”.

Test Project GGP Training

EDIT NAME

Status:Active

Type:Green Globes for New Construction (GG NC)

Quote Request

Project Registration

Test Project GGP Training

REGISTER PROJECT

Collaborators:

Dianne Elliott (owner)

EDIT

Project Quotes

View All Quotes

Project Documents

UPLOAD NEW

Test Project GGP Training

Delivered March 2nd, 2015. Quote Expires: May 30th, 2015

\$11,445.00

VIEW

No Project Files

Select “Continue to Checkout”.

My Cart

Product	Price	Qty	Total
GG NC Project Registration • Project #53313	\$1,500.00	1	\$1,500.00
Total			\$1,500.00

EMPTY CART

CONTINUE TO CHECKOUT

ADD PROMO CODE

Complete your billing and shipping information and select “Continue”.

GBI Store Checkout

Billing Information

Shipping Details

Name

Address

City

Postcode

Country

State

Phone

Email

Same as Billing Details

Name

Address

City

Postcode

Country

State

Phone

RETURN TO CART

CONTINUE

Read and Accept the End User License Agreement and select “Place Order”.

GBI Store Checkout

Billing Details

Dianne Elliott
1234 Sustainability Avenue
Portland 97239
Oregon
United States
5032740448
dianne@thegbi.org

Shipping Details

Dianne Elliott
1234 Sustainability Avenue
Portland 97239
Oregon
United States
5032740448

End User License Agreements:
WEB SITE USER AGREEMENT
This Terms of Use - Web Site User Agreement (this “Agreement”) is a binding contract between you, on behalf of yourself and, if you are accessing the Site in the course and scope of your employment, on behalf of your employer, and **Green Building Initiative**, Inc. (“GBI”). This Agreement...

Accept End User License Agreements? ☐

Payment

Payment Method
Select a Payment Method

Order Summary

Product	Total
1x GG NC Project Registration • Project #54875	\$1,500.00
Total	\$1,500.00

PLACE ORDER

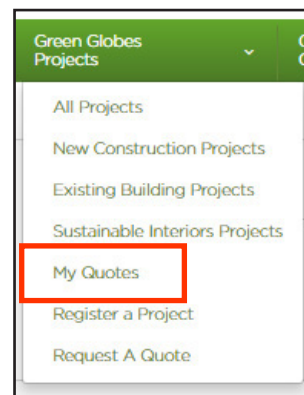
ORDER AN ASSESSMENT

When ready, you may order the third-party assessment online through the GBI website using the following steps. (Note: for large orders of multiple buildings, GBI can place the orders on your behalf for a nominal administrative fee.) The project should be ordered against the same account connected to the quote and if applicable, the previously ordered project registration.

If your quote included a project registration in addition to an assessment, you can register your project and order the assessment at the same time. To order the assessment, follow these steps:

From the account the quote is attached, log in from www.thegbi.org. Hover over Green Globes Projects in the green toolbar and select “My Quotes”.

Select the project for which you wish to purchase the assessment.



GREEN BUILDING INITIATIVE A practical approach to green building

WELCOME DIANNE ELLIOTT

Green Globes Projects | Guiding Principles Compliance Projects | My Certifications & Courses | Documents & Files

MY ACCOUNT / GREEN GLOBES PROJECTS / MY QUOTES

GREEN GLOBES PROJECTS

- All Projects
- New Construction Projects
- Existing Building Projects
- Sustainable Interiors Projects
- My Quotes**
- Register a Project
- Request A Quote

My Green Globes Project Quotes

Search Here

New Quotes | Archived Quotes

Test Project GGP Training

Test Project GGP Training #2

Review the quote and ensure this is the assessment you wish to purchase the quote and select “Purchase Now”.

Quote #58802: Test Project GGP Training

\$12,445.00

Quote Delivered: January 15th, 2016

Quote Expires: May 31st, 2016

Project Detail:

GGP Test Project, Alexandria VA, 70,000

Description of Services:

Third-party review of building data provided by the client through the Green Globes online evaluation and building construction documents, third-party on-site assessment to verify building data, third-party final report containing building rating and certification information.

Qty	Item	Price
1	GG NC Project Registration	\$1,500.00
1	Green Globes NC Design Review & On-Site Assessment	\$8,500.00
1	Assessor Travel (flat fee) Travel charges are paid upfront as a \$1500 flat fee.	\$1,500.00
1	Certification Plaque - Single Building (16x16") Certification plaque is optional.	\$945.00
1	Complimentary CIEB Registration w/ NC Assessment Clients purchasing a Green Globes New Construction third-party assessment are eligible to receive a complimentary subscription to the Green Globes CIEB online evaluation to benchmark building performance. The complimentary subscription is valid for 24 months from the date of NC certification. After 24 months, the subscription will expire and client must pay then-current subscription price to extend the expiration date.	\$0.00

CIEB Project Registration Discount \$1500 Value - Building Benchmarking

Due Net 30 Days

Total Discount: -\$1,500.00

GRAND TOTAL: \$12,445.00

PURCHASE NOW

Review the order, select your payment option, then click “Continue to Checkout”.

My Cart

Quote #58802: Test Project GGP Training

Product	Price	Qty	Total
GG NC Project Registration • Project #55801	\$1,500.00	1	\$1,500.00
Green Globes NC Design Review & On-Site Assessment	\$8,500.00	1	\$8,500.00
Assessor Travel (flat fee)	\$1,500.00	1	\$1,500.00
Certification Plaque - Single Building (16x16")	\$945.00	1	\$945.00
Complimentary CIEB Registration w/ NC Assessment	\$0.00	1	\$0.00
Subtotal			\$12,445.00
Total			\$12,445.00

Payment Options

☒ Use One Payment Method.
Pay Full Amount of \$12,445.00 by Credit Card or receive an Invoice

☐ Use Two Payment Methods
Pay for all Project Registrations with a credit card payment of \$1,500.00 and receive an invoice for \$10,945.00. You will gain immediate access to these items purchased.

EMPTY CART

CONTINUE TO CHECKOUT

GBI Store Checkout

Quote 55802: Test Project GGP Training

Product	Price	Qty	Amount
GG NC Project Registration	\$1,500.00	1	\$1,500.00
Green Globes NC Design Review & On-Site Assessment	\$8,500.00	1	\$8,500.00
Assessor Travel (flat fee)	\$1,500.00	1	\$1,500.00
Certification Plaque - Single Building (16x16")	\$945.00	1	\$945.00
Complimentary CIEB Registration w/ NC Assessment	\$0.00	1	\$0.00
Subtotal			\$12,445.00
Order Total Due Now			\$12,445.00

RETURN TO CART

CONTINUE

Select “Continue”.

SECTION 6 | Green Globes NC Program

Page 54

Complete the billing and shipping information and select “Continue”.

GBI Store Checkout

Billing Information	Shipping Details
Name Dianne Elliott	☐ Same as Billing Details
Address Sustainability Drive	Name
City Portland	Address
Postcode 97239	City
Country United States	Postcode
State Oregon	Country United States
Phone 5032740448	State Select...
Email dianne@thegeb.org	Phone
RETURN TO CART	CONTINUE

GBI Store Checkout

Billing Details	Shipping Details
Dianne Elliott Sustainability Drive Portland 97239 Oregon United States 5032740448 dianne@thegeb.org	Dianne Elliott Sustainability Drive Portland 97239 Oregon United States 5032740448

End User License Agreements:
Green Globes Assessment Services Agreement This Assessment Services Agreement (this "Agreement") is between you, on behalf of yourself and, if you are entering into this Agreement in the course and scope of your employment, on behalf of your employer (collectively, "Customer") and Green Building Initiative, Inc., an Oregon public benefit nonprofit corporation ("GBI"), for the purpose of engaging a Green Globes Assessment.

Accept End User License Agreements? ☐

Payment

Online credit card payments are not permitted for amounts of \$5000 or more. Your order will be invoiced.

PO Number (optional)

W-9 Needed?

Order Summary

Product	Total
1 x GG NC Project Registration • Project #55801	\$1500.00
1 x Green Globes NC Design Review & On-Site Assessment	\$8,500.00
1 x Assessor Travel (flat fee)	\$1500.00
1 x Certification Plaque - Single Building (16x16")	\$945.00
1 x Complimentary CIEB Registration w/ NC Assessment	\$0.00
Total	\$12,445.00

Review your order. Read and Accept the End User License Agreement and select “Place Order”.

A GBI staff member will contact you via email to confirm receipt of your order, outline your next steps, and answer any questions.

STAGE I DESIGN REVIEW

The purpose of this review is to provide project teams/clients a preliminary look at how the design complies to the Green Globes NC criteria. It is beneficial to begin the review as early as possible to afford the opportunity to receive early feedback and implement changes to improve sustainability in the most cost effective manner.

Complete the Construction Documents Survey

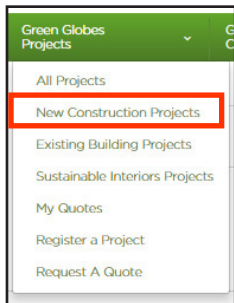
Every assessment begins with the completion and submission of the Construction Documents-Client online survey. The survey is accessible once the project registration is paid.

The survey should be complete when there is a set of drawings for review. It can be done with an earlier drawing set or after construction documents are complete. It is strongly recommended the survey be completed by the project team; with questions being assigned and addressed by the parties responsible for that area in the design and construction process.

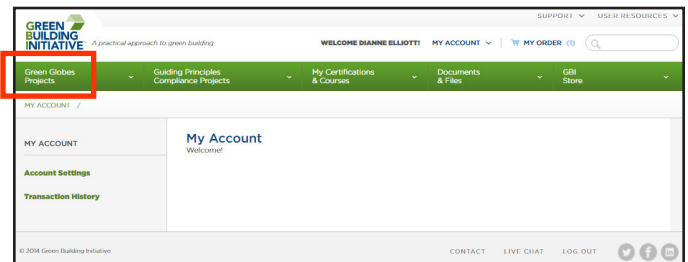
Add Project and Complete Basic Project Information

The first task is to connect your project to the survey. To add your project, login to the GBI Account from which the assessment and/or project registration were ordered.

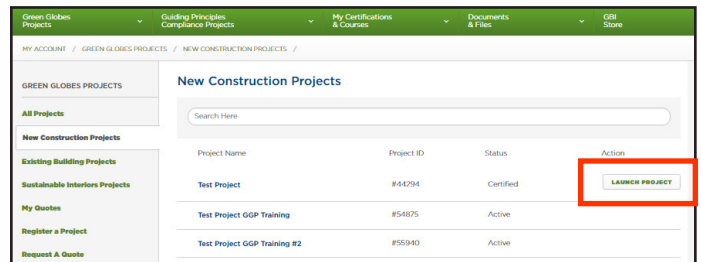
Select “Green Globes Projects” from the green toolbar.



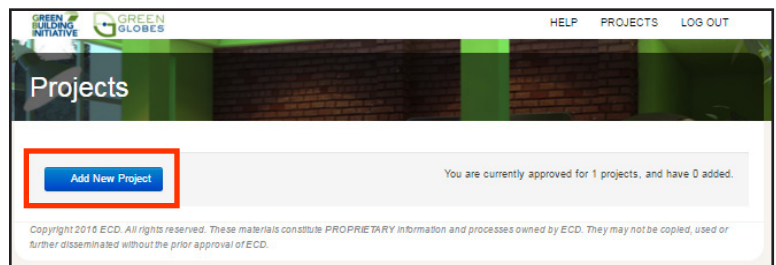
Select “New Construction Projects”



Select “Launch Project” next to the project you wish to open.



Select “Add New Project”.



At the top of the screen select the button to indicate you intend to complete a full assessment on this project. Complete the remainder of the Basic Building Information and select “Save & Continue”.

You will now have access to the left navigation where you can access the surveys.

As a reminder, the Construction Documents and Post Construction surveys are required for certification. Access to the Post Construction survey is only available after the Stage I Design Review is complete.

Access the Surveys in Subsequent Sessions

If you have previously added your project and entered your basic building information, you will not be automatically directed to the Basic Building Information page. Once you select “Launch Project” you will be directed to the Project Dashboard where you can select “Enter Survey” next the survey you wish to enter.

Add Collaborators

In addition, if you have other team members who require access to the surveys, you may add them as collaborators. From your project page, click on the name of the project.

Select “Edit” under the Collaborator section.

Enter the GBI Account User Name for the person for whom you wish to grant access. Select “Add Collaborator”.

This screenshot shows the 'Add Project' form with the 'Basic Project Information' section. It includes a header with a house icon and the title 'Add Project'. Below the title is a breadcrumb 'Projects / Add Project'. A paragraph of instructions follows. The form is divided into sections: 'BASIC INFORMATION' and 'BUILDING PROJECT INFORMATION'. Under 'BUILDING PROJECT INFORMATION', there is a 'Software Use' section with two radio buttons: 'No, we intend to do a full assessment on this project' (selected) and 'Yes, this is a sample to test the software'. Below this is a 'Basic Building Information' section with two input fields: 'Who is the project client?' and 'What is the name of the project?'.This screenshot shows the 'Project Status' dashboard. At the top, it says 'Project Status' and 'Active, Pending Client CD Submission'. Below this is a 'Surveys' section with a 'Status key' showing four colored boxes: red for 'User Edit', purple for 'Assessor Edit', yellow for 'Admin Review', and green for 'Completed'. A note states: 'Basic Information, Predesign and Schematic Design may always be updated while project is active.' Below this is a table with columns: 'Name', 'Progress', 'Score', and an action button. The table lists four surveys: 'Basic Information' (100% progress, 'Enter Survey' button), 'Predesign' (80% progress, 'Enter Survey' button), 'Schematic Design' (40% progress, 'Enter Survey' button), and 'Construction Documents - Client' (80% progress, 45% score, 'Enter Survey' button).This screenshot shows the 'New Construction Projects' dashboard. It has a green header with navigation links: 'Green Globes Projects', 'Guiding Principles Compliance Projects', 'My Certifications & Courses', 'Documents & Files', and 'GBI Store'. Below the header is a sidebar with 'MY ACCOUNT' and 'GREEN GLOBES PROJECTS / NEW CONSTRUCTION PROJECTS'. The main area has a search bar and a table of projects. The table has columns: 'Project Name', 'Project ID', 'Status', and 'Action'. It lists three projects: 'Test Project' (ID #44294, Status 'Certified', 'LAUNCH PROJECT' button), 'Test Project GGP Training' (ID #54875, Status 'Active', highlighted with a red box), and 'Test Project GGP Training #2' (ID #55940, Status 'Active').This screenshot shows the 'Test Project GGP' project page. It has a header with 'Test Project GGP', 'EDIT NAME', and 'LAUNCH PROJECT' buttons. The main area shows project details: 'Status: Active', 'Type: Green Globes for New Construction (GG NC)', 'Quote Request: MARCH 24, 2015: TEST PROJECT GGP', and 'Project Registration: Registered'. On the right, there is a 'Collaborators' section listing 'Mark Scherrer (owner)', 'Jane Smith', and 'John Doyle'. Below the list is an 'EDIT' button, which is highlighted with a red box.This screenshot shows the 'Project Collaborators' modal. It has a title bar with 'Project Collaborators' and a close button. Below the title bar is a 'REMOVE' button. The main area is titled 'Add Collaborator' and contains the text 'Collaborators must enter their GBI username below'. There is an input field for the username and an 'ADD COLLABORATOR' button, which is highlighted with a red box. At the bottom right is a 'CLOSE' button.

Save Responses

Criteria are allocated specific point values according to the response provided (Yes, No, N/A, or a threshold value).

You must select “Save & Continue” at the bottom of each page to save your responses and advance to the next page.

As previously mentioned, the Green Globes online system is interactive and automatically calculates the projected Green Globes score based upon your responses to the Construction Documents survey questions. Each time you save a page of responses within the Construction Documents survey, the projected score updates accordingly. The system also indicates what percentage of the survey has been completed depending on the total number of questions answered and saved.

Technical Reference Manual

We recommend you use the online [Green Globes for New Construction Technical Reference Manual](#) when completing your survey. It contains all of the criteria for the NC program with possible responses and associated points. Tooltips, assessment guidance and reference material links are also provided.



GREEN GLOBES FOR NEW CONSTRUCTION

Technical Reference Manual

Version 1.4

Release Date: October 26, 2015

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74

Assessment Guidance:
Projects can utilize the ENERGY STAR® Portfolio Manager or other third-party tools to continually track energy usage data. Projects should check with their utility providers to see if they offer integration with their utility accounts to facilitate automated uploads. If the client does not desire to use the free ENERGY STAR® Portfolio Manager tool, paid services are also available for certain building types.

3.3.2 Energy Demand

3.3.2.1 Passive Demand Reduction

3.3.2.1.1 Criteria:
Does a minimum of 20% of the building envelope gross wall area have either of the following:

- A minimum heat capacity of 7 Btu/ft² °F (143 kJ/m²K)?
- A minimum heat capacity of 5 Btu/ft² °F (102 kJ/m²K), provided the walls have a material unit weight equal to or less than 120 lb/ft³ (1920 kg/m³)?

Answers:

- Minimum capacity of 7 Btu/ft² °F (3 points)
- Minimum capacity of 5 Btu/ft² °F (3 points)
- No (0 points)
- N/A

Tooltip:
As per ANSI/ASHRAE/ES Standard 90.1-2010, Mark "N/A" for Climate Zones 6-8.

References:

- ANSI/ASHRAE/ES Standard 90.1-2010
- ASHRAE Fundamentals Handbook, 2009, Chapter 6
- California Title 24, Joint Appendix JA4-2008
- http://www.energy.ca.gov/title24/2008standards/rulemaking/documents/pre-15-day_language/appendices/joint_appendices/IA%204%20-%20U-Factors%20-%20Rev%2014-15-day-1.pdf

Assessment Guidance:
Thermal mass is the ability of a building component (envelope, interior walls, floor slabs, etc.) to absorb and store heat. When this strategy is utilized effectively, it can smooth out temperature variations within a building, thus reducing the peak electrical demand and consumption associated with cooling loads. Materials with good thermal mass have a high density and good thermal conductivity. In general, the denser a material is, the higher its thermal mass. For example, concrete has high thermal mass, brick has a lower thermal mass, and insulation has almost none. Good thermal conductivity is important if the material is to perform in this manner, as the material must allow heat to flow through it.

The heat capacity of an object is equal to the combined product of the object's specific heat, its density and its thickness. It is defined as the amount of BTU that must be added to 1 ft² of surface area to uniformly elevate the temperature of the construction by 1°F. For walls with multiple layers, the overall heat capacity is equal to the sum of the heat capacities for each individual layer. Heat capacity can be approximated by multiplying the weight of a square foot of the wall, roof, or floor by 0.2 (inch-pound units). For example, a wall with a surface density of 100

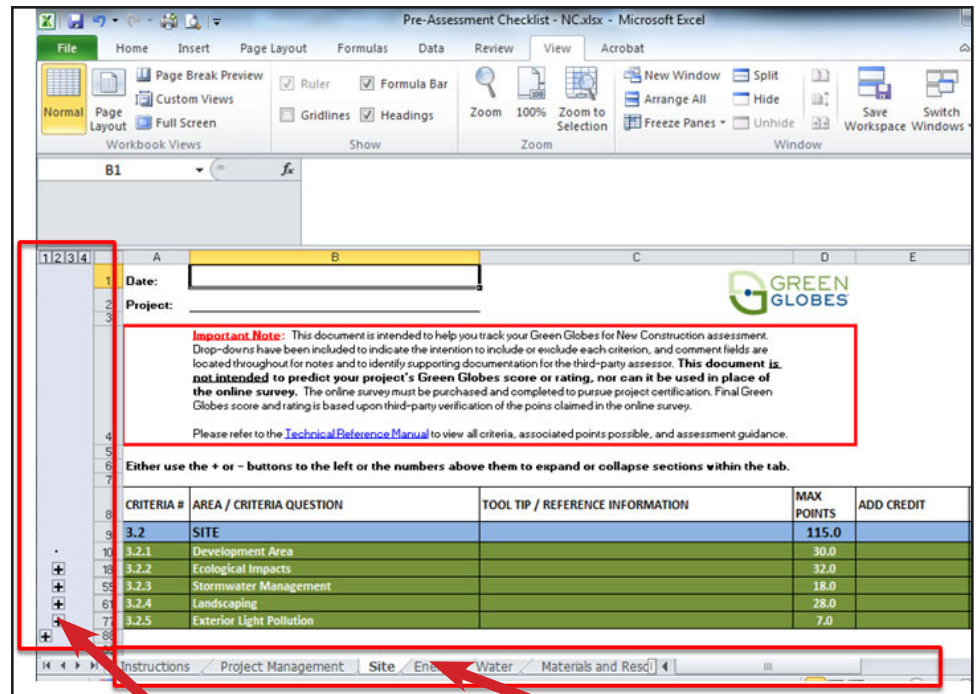
GREEN BUILDING INITIATIVE | 800.503.274.0448 | WWW.THEGBI.ORG

Pre-Assessment Checklist

The project manager and team should also utilize the [GG NC Pre-Assessment Checklist](#) (available for download online) to record the specific document and location within that document that supports their responses. This checklist can then be used to assist the team when gathering documentation to submit to the assessor. It is recommended the team include this file with the documentation packet submission to assist the assessor in locating the specific documentation used to support the response.

It is NOT intended to be used as scoring tool, as it does not contain threshold values for individual responses.

The GG NC Pre-Assessment Checklist is an Excel-based document that includes one tab for each Environmental Assessment Area. The file includes expandable sections to be able to view each criterion, associated ToolTips and maximum possible points.



[Expandable Sections](#)

[7 Tabs for Assessment Areas](#)

[ToolTips](#)

CRITERIA #	AREA / CRITERIA QUESTION	TOOL TIP / REFERENCE INFORMATION	MAX POINTS	ADD CREDIT	PERSON ASSIGNED TO?	DUE DATE	FILE NAME(S)	FILE PATH, NAME, DIRECTORY	NOTES
3.2	SITE		115.0						
3.2.1	Development Area		30.0						
3.2.1.1	Urban Infill and Urban Sprawl		10.0						
3.2.1.1.1	Is the project located within 0.5 mile (0.8 km) of a commercial zone?		5.0						
3.2.1.1.2	Is the building being constructed on a previously developed site, served with existing utilities for at least a full year before construction?	Site must have been served by utilities (electric power, water, and sewer) for at least a full year before construction began.	5.0						
3.2.1.2	Greenfields, Brownfields and Floodplains		20.0						
3.2.1.2.1	Is the building being constructed on a remediated brownfield or remediated Superfund site?	A brownfield site is an abandoned, idle or underutilized commercial or industrial property where past actions have caused known or suspected environmental contamination, but where there is an active potential for redevelopment.	10.0						
3.2.1.2.2	Does the project location avoid sensitive sites (i.e. land that was farmland, a public park, a wooded area, prairie, wetland, wildlife corridor or recreational area for at least 5 years prior to time of sale/lease or from the beginning of its use as a habitable space located higher than the 100-year flood plain)?	Ensure that any necessary Environmental Assessments have been carried out.	6.0						
3.2.1.2.3		A "100-year floodplain" is the geographic extent of the flood area expected to be equalled or exceeded every 100 years on average, as identified on a flood-risk map approved by municipal, provincial or federal government or land use plan, interim control by-law or municipal planning by-law. Where there is inconsistency between maps, the most recent map or the most recent flood elevation (whichever is greater) should be used to delineate the extent of the floodplain. Any construction at a level below the 100 year floodplain must be compliant with FEMA Technical Bulletin 2/2006.	4.0						
3.2.2	Ecological Impacts		32.0						
3.2.2.1	Site Disturbance and Erosion		8.0						
	Green Globes provides two paths for assessing site disturbance and erosion:		5.0						
	Path A: Erosion and Sedimentation Control Plan - 5 points								
	Path B: Erosion and Sedimentation Control Specifications - 5 points								

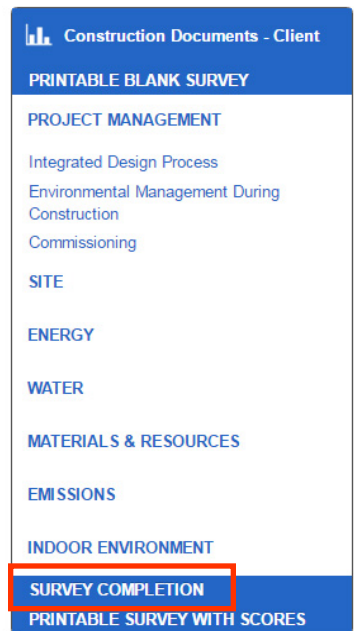
[Maximum Possible Points](#)

[Assign Tasks and Record Documentation](#)

Submit the Construction Documents Survey

When your assessment is paid and your supporting documentation is available, please submit your completed Construction Documents survey for review.

To submit your survey, select the “Survey Completion” link from the left navigation bar. Once submitted, your Construction Documents survey will lock and you will no longer be able to edit your responses.



SURVEY COMPLETION

OVERALL COMPLETION: 83%

The following pages have outstanding items that have not been completed:

Page
Indoor Environment: Source Control and Measurement of Indoor Pollutants
Indoor Environment: Lighting Design and Systems
Indoor Environment: Thermal Comfort
Indoor Environment: Acoustic Comfort

The project/building owner or designated representative should be provided a final opportunity to review and approve the proposed submission to avoid potential conflicts later in the project delivery process. In addition, did all requisite building professionals provide input and review the final survey responses, including any or all of the following personnel as applicable to the project?

- Owner or Owner's Representative
- Architect
- Project Sustainability Coordinator
- Mechanical Engineer
- Energy Engineer (if different from above)
- Civil Engineer
- Structural Engineer
- Electrical Engineer
- Commissioning Authority
- Lighting Engineer
- Landscape Architect
- Acoustics Engineer
- Interior Designer

☐ Yes, the survey has been reviewed by all requisite building professionals and the project owner/representative, as applicable.

Required answers for this survey are only 83% complete. If you wish to submit this survey for assessor review at this time, please check the box below to acknowledge that you are submitting an incomplete survey, and then click the button below.

☐ Yes, I wish to submit this incomplete survey for assessor review.

Submit Survey for Assessor Review

Verify that the survey has been reviewed by all of the necessary project team members and check the appropriate box.

If your survey is not 100% complete, you will have links at the top of the page. Selecting the link will take to the location of the criteria that require completion. If your survey is complete, the overall completion will indicate 100%.

If you would like to submit an incomplete survey you must check the box to confirm that is your desire.

When ready, select “Submit Survey for Assessor Review” button at the bottom of the screen.

Scheduling the Design Review

To schedule your assessment, call or email your GBI Project Manager. He/she will reach out to the pool of certified third-party Green Globes Assessors (GGA's) to determine who is available and best suited for your project. Once secured he/she will assign an assessor to your project and email a scheduling letter that provides the assessor's contact information and the official date on which the Stage I review will begin. Your assigned assessor will contact you to discuss the specific details of the assessment, such as how to transmit your construction documents.

Gather & Submit Documentation

You will ensure all documentation that verifies the survey responses is gathered and ready for submission and communicate with the assessor regarding the timing and method of delivery. Some assessors prefer a half-set of drawings, others are fine with electronic submissions. Common methods of CD transmission include using a file-sharing service or setting up an FTP site.

Assessor Review & Third-Party Report

Upon submission of your Construction Documents survey, your responses are used to populate a separate version of the survey that your assessor can view and edit. Once your assessor has received all required documentation, he/she will review and compare the information provided with your survey responses. The assessor will update any responses that are incorrect or cannot be verified. He/she will document items that are yet to be verified to include in the Stage I Design Review Report.

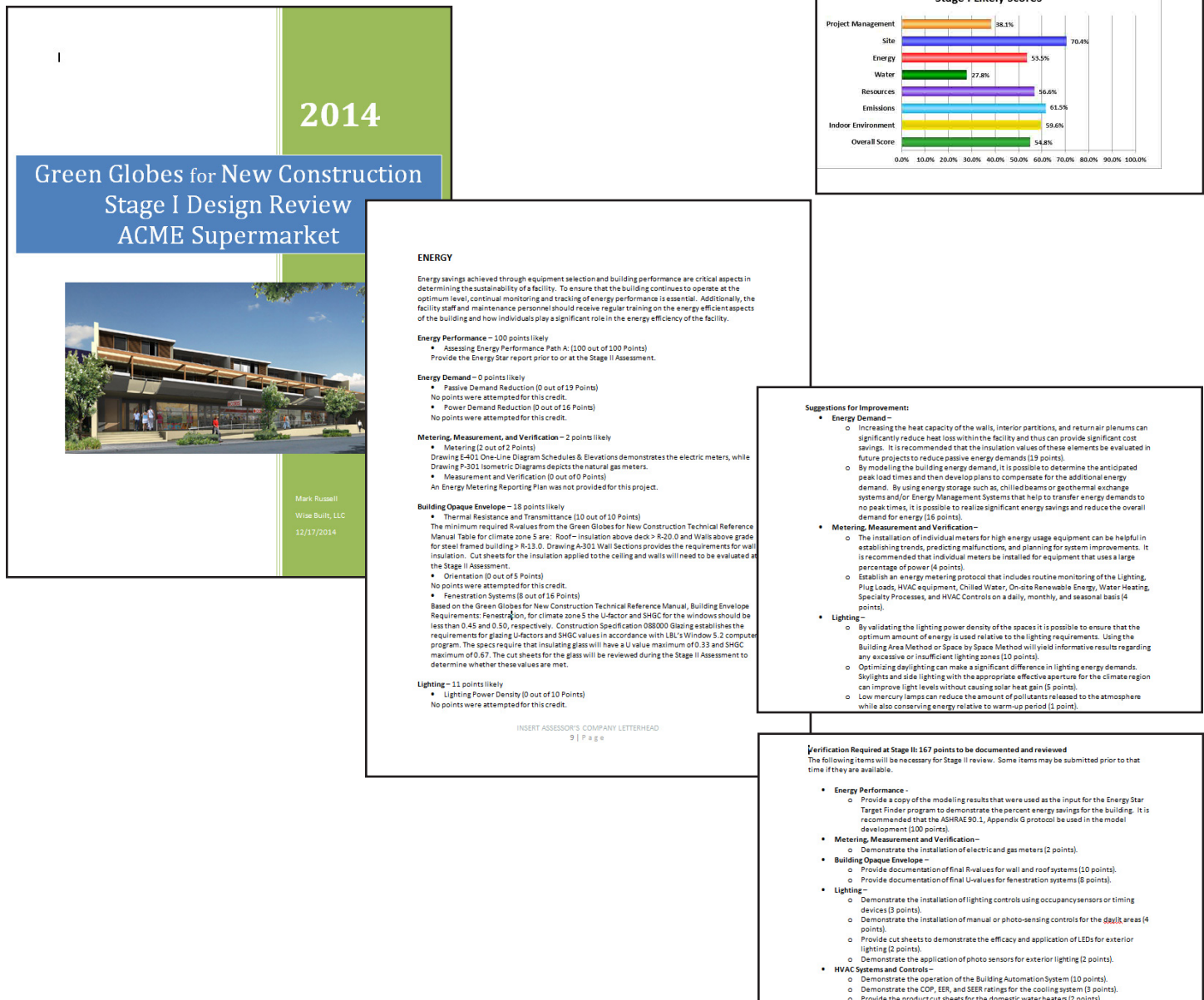
Here are some examples of what the assessor will do during his/her review:

- Review the Energy design model(s) to confirm it aligns with the claimed Energy performance points
- Review the Water Consumption Calculator
- Access the project address using Google Earth for the following:
 - Previous development of the site
 - Nearest body of water
 - Location of public transportation
 - Nearby bicycle paths
- Determine climate zone for the building and determine the impacts on the criteria
 - Start by finding the county in which the building is located which may be listed on the drawings and Google search
 - Access a climate zone map by county and state at <https://energycode.pnl.gov/EnergyCodeReqs> Determine applicable minimum efficiency
 - Use ASHRAE 90.1 for the minimum efficiency requirements for heating and cooling equipment.
 - 3.3.6.4 Heat Pumps
 - 3.3.6.5 Heating Equipment

• 3.3.6.8 Domestic Hot Water Heaters

- Determine walkability and bikeability from <https://www.walkscore.com/cities-and-neighborhoods/>
- Check the flood plain from the FEMA flood plain maps at <https://msc.fema.gov/portal>
- Determine the radon potential from <http://www.epa.gov/radon/zonemap.html>

The assessor will write a formal report that summarizes the results of the Stage I Design Assessment, provides a projected Green Globes rating, identifies the project features and criteria still requiring verification, as well as offers improvement recommendations that can be implemented before the Stage II On-Site Assessment. Please note that the Stage I Design Review Report is non-binding and only provides an estimate of the Green Globes rating that the building is likely to achieve if the current survey responses can be verified during the Stage II site visit. The primary purpose of the Stage I review is to provide feedback on where the project currently stands in regards to achieving Green Globes certification.



In the last step of the Stage I Design Review, GBI will review the report for consistency, technical incongruence, grammar and aesthetics. We will notify the assessor regarding any clarification requests or needed updates. If required, the assessor will update and resubmit the report. We will review the report for to ensure the updates are complete. Once approved, we will issue to the project manager by email a PDF version of the final Design Review Report with any applicable attachments. The project team will want to review the report to see what items still require verification documentation and determine if any recommendations will be implemented prior to construction completion to ensure the most sustainable building and highest possible Green Globes score for the finished building.

STAGE II ON-SITE ASSESSMENT

Once construction is essentially complete through the punch list, the Post Construction survey is updated, and documentation identified as missing is gathered, it is time to perform Stage II On-Site Assessment. The purpose of the On-Site Assessment is to verify the level of compliance to the Green Globes criteria which results in the final assessment rating and certification level (certification is based upon a minimum score of 35%).

Complete the Post Construction Survey

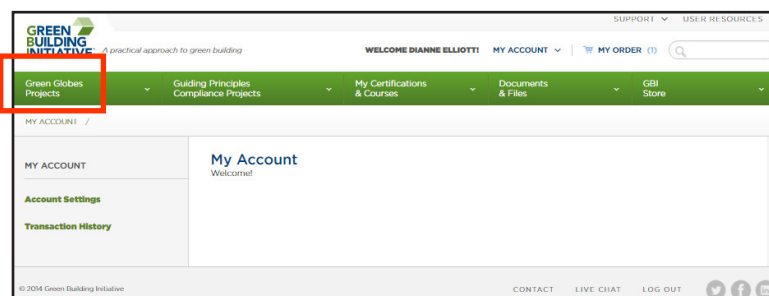
To reiterate, the Construction Documents survey and Post Construction survey within Green Globes NC are identical. When the assessor finalizes edits to his/her version of the Construction Documents survey at the end of the Stage I review, he/she will submit the survey. GBI will review and release the survey, which will populate the client version of the Post Construction survey with the assessor responses, and allow the client access for review and edit.

Prior to the site visit, the project manager will update the online Post Construction-Client survey with any changes since the Stage I Design Review. The benefit of automatically populating the Post Construction survey from the assessor's Construction Documents survey is that you do not have to re-enter all of your survey responses after construction is complete—you only need to update items that may have changed during the construction process due to modifications to the budget, design, owner requirements, etc.

When ready to schedule the assessment, the project manager will submit the online survey to GBI who will release it to the assigned assessor.

To access and update your Post Construction survey follow these instructions:

Login to your GBI Account and select "Green Globes Projects". If you have many projects, you may want to filter them by project type and select "New Construction".



From the project list, select “Launch Project” next to the project you wish to access.

Green Globes Projects			
Search Here			
Project Name	Project ID	Status	Action
Test Project	#44294	Certified	LAUNCH PROJECT
Test Project GGP Training	#54875	Active	LAUNCH PROJECT
Test Project GGP Training SI	#55498	Active	LAUNCH PROJECT
Test Project GGP Training - EB	#55587	Active	LAUNCH PROJECT
Test Project GGP Training #2	#55940	Active	LAUNCH PROJECT

Click “Enter Project”.

Projects				
Projects				
Name	Client	Condition	Status	Actions
Test Project GGP Training		Active	Pending Client PC Survey Submission	Enter Project

The dashboard will now show the Post Construction Client survey, and it will be pink indicating the user may now edit the survey. Select “Enter Survey”.

Project Status		
Active, Pending Client PC Survey Submission		
Surveys		
Status key: ■ = User Edit ■ = Assessor Edit ■ = Admin Review ■ = Completed		
Basic Information, Predesign and Schematic Design may always be updated while project is active.		
Name	Progress	Score
Basic Information	100%	
Predesign		
Schematic Design		
Construction Documents - Client	100%	94%
Construction Documents - Assessor	100%	96%
Post Construction - Client	100%	96%

99%
COMPLETION

68%
SCORE

Post-Construction - Client

Project Management: Integrated Design Process

Projects / Test Project GGP Training / Post-Construction - Client

Basic Information

Pre-Design

Schematic Design

Construction Documents - Client

Construction Documents - Assessor

Post-Construction - Client

PRINTABLE BLANK SURVEY

PROJECT MANAGEMENT

Integrated Design Process

Environmental Management During Construction

Commissioning

SITE

ENERGY

WATER

MATERIALS & RESOURCES

EMISSIONS

INDOOR ENVIRONMENT

SURVEY COMPLETION

PRINTABLE SURVEY WITH SCORES

This survey is currently in client update status.

INTEGRATED DESIGN PROCESS (IDP)

Pre-Design Meetings

Was an integrated design process (IDP) employed, which included a minimum of five of the following key design disciplines involved in the project? (check as many key disciplines below as apply)

Architect?

Building Science or Building Forensics Expert?

Civil Engineer?

Commissioning Agent?

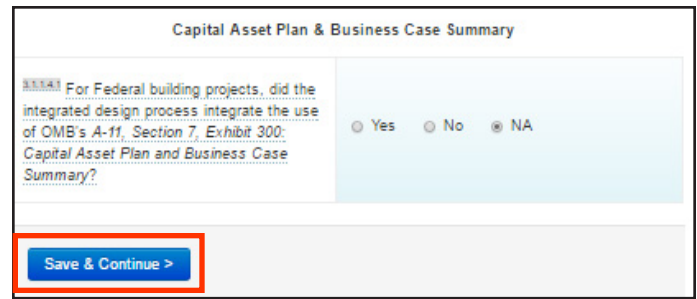
Community Representative(s)?

Contractor?

Electrical Engineer?

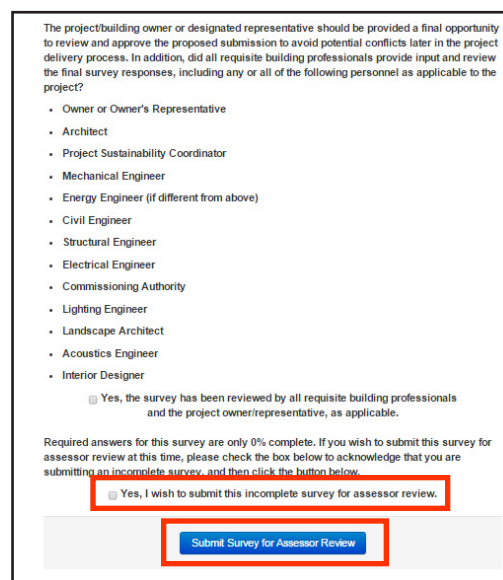
Select the sections you wish to update, and the criteria will appear on the right. Review and select the appropriate responses.

Select “Save & Continue” to save your selections and advance to the next page.



Submit the Post Construction Survey

When you are ready to schedule the site visit, submit the Post Construction survey the same way you did for the Construction Documents survey using the Survey Completion Link in the left navigation. Submission will lock the survey, and you will no longer be able to make edits.



Gather & Submit Documentation

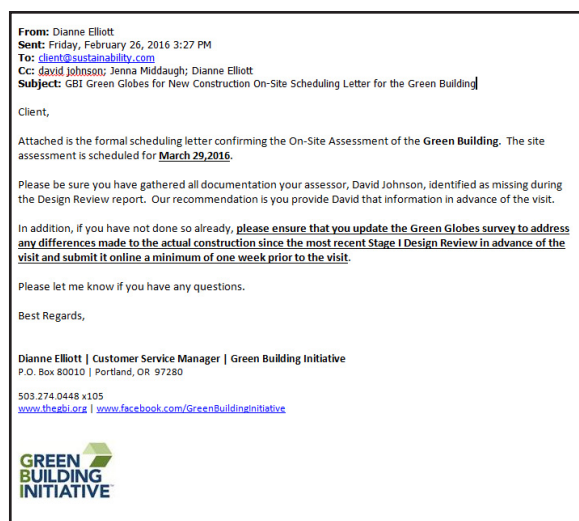
The project manager/client will ensure all documentation identified as missing in the Stage I Design Report is available and ready to provide to the assigned assessor. To make the site visit more efficient, it is recommended he/she discuss with the assessor submitting the missing documentation in advance of the visit.

Schedule On-Site Assessment

Next, contact GBI to schedule your Stage II On-Site Assessment. (If you did not order and pay for the Stage II assessment along with the Stage I assessment, then you will need to do so at this time. Please contact GBI for a current quote.)

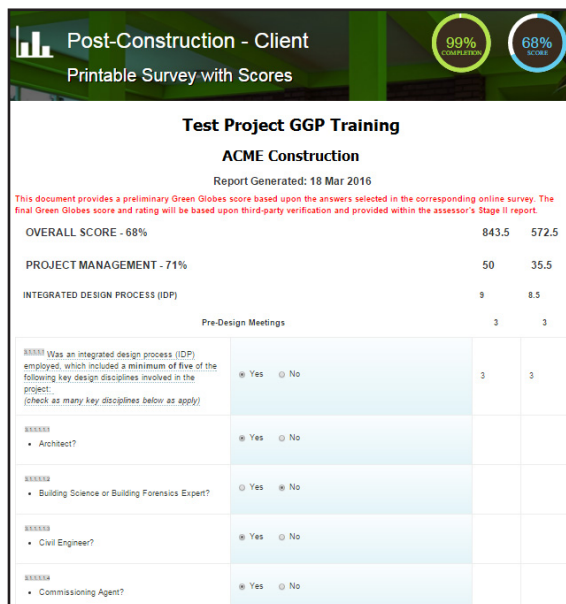
Provide your preferred date range for the site visit, and GBI will reach out to your assigned assessor regarding his/her availability to identify a date that is mutually amenable. If the building is undergoing commissioning, the site visit should be scheduled on a date when the report will be available for assessor review. Keep in mind that a minimum of one month advance notice is required for scheduling.

Your GBI Project Manager will send out a scheduling letter confirming the assessment date and location and reiterating the assessor's contact information. The assessor will contact you to discuss specific details of the assessment, including the itinerary, recommended participants, etc.



Prepare for Site Visit

When preparing for the Stage II On-Site Assessment, you should organize the assessment documentation in the order of the criteria within the survey. To help with the organization process, you can print a copy of the survey with your responses by clicking “Printable Survey with Responses” from the Post Construction section of the left sidebar.



You should also secure a meeting room and arrange for all key personnel to be available during the assessment. The length of the site visit will vary depending on building size and the level of document

organization, but a typical site assessment of a 50,000 SF building takes approximately 4 hours.

Schedule a guided site tour. It should be organized so that the building walk-through occurs in an efficient and orderly sequence (e.g. from roof deck through main floors, to basement, to external site) and the items to be inspected are seen throughout a single path. The assessor should not have to retrace his/her steps unless certain building features need to be revisited.

The assessor will contact the project manager to discuss the site visit and provide an agenda in advance.

Assessor On-Site Assessment

During the site visit the assessor will verify conformance to the assessment criteria and determine point awards based upon additional documentation and the physical inspection of the building and site. The site visit consists of three phases: the Introductory Meeting, the Building/Site Tour and the Closure Meeting.

Introductory Meeting

On the day of the site visit, you should meet the assessor at a pre-determined time and place. The assessor will begin with a brief meeting with key project personnel. An introduction of team members is recommended. He/she will review the survey and the supporting documentation, specifically addressing items identified in the Design Review Report as still needing verification. He/she will note all documentation still lacking. Please discuss all relevant changes that occurred during the construction phase (post Stage I Design Review). Discuss any non-applicables and address any questions.

The assessor will look for the following documentation or evidence of the following during the visit organized by assessment area.

Project Management

- A variety of meeting minutes from the design and construction phases. He/she will pay close attention to the attendees to verify they match the online survey. He/she will look for topics covered to confirm that the sustainable aspects were addressed.
- The EMS program which may be from the construction contractor. He/she will specifically look for the risk assessment evaluations as part of the EMS development.
- The final Commissioning report. He/she will pay attention to the areas that have been evaluated to make sure they match the online survey.

Site

- A due diligence report to determine what was on the site previously and thus evaluating if a Phase I or II Environmental Assessment is necessary.
- When evaluating Heat Island Effect, he/she will want to see that the material manufacturer supply the specific SRI for the material they are installing. Sometimes this is on the cut sheets. Most TPO roofing manufacturers will have this information on their websites.

Energy

- Energy Performance should be accompanied by the design modeling data/outputs and any

calculations.

- ENERGY STAR – He/she will review the design output and the Target Finder output. Suggested documentation for Path A includes a description of the computer software program used to provide the energy modeling results, a narrative describing the energy efficiency measures included in the project, a summary of energy end-uses, and monthly energy consumption and cost values. The narrative should also include the Target Finder results, including the EUIs and normalization factors.
- ASHRAE – He/she will review both design models, baseline and the designed building.
- ANSI Standard – He/she will review the worksheet that is part of the standard.
- bEQ – He/she will review proof of certification from ASHRAE. For space optimization he/she will look for a demonstration of how the designed building HVAC distribution performs better than a standard building.
- He/she will pay attention to the climate zones and the specified minimum or maximums.
- He/she may ask for a full demonstration of the BAS during the walk through can answer many of the related questions.

Water

- He/she will want to see cut sheets to determine flows when values are not stamped on the fixtures. In many cases, the construction contractor can provide packaging that includes appropriate values.
- He/she will want to understand the ownership of irrigation systems to determine who is responsible for improvements.

Materials and Resources

- He/she will want to see that the LCA data was developed prior to the construction phase to compare a baseline alternative to the planned design. After the construction phase, EPD's or third party certification are acceptable.
- Spreadsheets can be used to demonstrate the percentage of materials in compliance versus total materials.
- Minimized use of raw materials requires the owner to explain the standard procedure and then demonstrate how they have provided a material or resource savings.
- ComCheck or Certificate of Occupancy inspection reports can be useful in verifying Building Envelope installation.

Emissions

- He/ she will look for refrigerant details, which are often stamped on the HVAC equipment.
- When a variety of equipment is provided, he/she may perform a weighted average of the refrigerant impact based on the cooling capacity.
- He/she will visit all janitor's closets on the site visit. Often, they may have a combination of techniques being used in which they are not all compliant with the requirements.

Indoor Environment

- He/she will fully review the HVAC operation sequence to understand the air flows and enable accurate analysis of the air intake and exhausts.
- Product cut sheets or samples of product containers available on the walk-through can provide details on VOC.
- He/she will look for reference specifications such as ASHRAE 55-2010 on the drawings.

Documents most commonly missing from submission are the following:

- Meeting minute notes to evaluate project management
- Landscape drawings because they are not in the bid set many times
- Photometric site plan
- Flood plain information

Building/Site Tour

After the meeting, you or a designated representative will take the assessor on a guided tour of the building and site. During the tour, the assessor will need full access to the mechanical rooms, rooftop, basement, parking garages/lots, and work areas. He/she will document findings, and take pictures of verified building features. The assessor will strive to be minimally intrusive but may need to inspect conference rooms and secure areas of the facility.

Below is a list by building area of items he/she will inspect:

Roof

- Surface material and SRI
- Distance between air intakes and pollution source
- Air exhausts
- HVAC Systems
- Air filters

Restrooms

- Toilet flow
- Urinal flow
- Sink flow
- Drains
- Dedicated exhaust

- Motion sensors

Mechanical Spaces

- Water heater
- Cooling equipment and refrigerant
- Air handling equipment and access
- Leak detection
- Filters
- Meters
- Air economizers
- Fans and ductwork

Exterior

- Photo of building
- Landscaping
- Irrigation system
- Exterior lights
- SRI of walls and sidewalks
- Smoking sign and designated smoking area
- Sensitive areas
- Bicycle racks
- Recycling and waste handling

Interior

- Lighting control
- Shading devices
- CO₂ sensing
- ENERGY STAR appliances
- Motion sensors
- Photometric sensing
- Janitor closets

Facilities Management Office

- Building operation manuals
- Building automation systems

Closure Meeting

When the tour is finished, the assessor will conduct a closure meeting to review the findings, provide feedback regarding points the client is seeking, and identify items still requiring verification documentation. He/she will set expectations for the next steps, including the time line for submission of missing items and report delivery.

POST ON-SITE ASSESSMENT

Missing Documentation

Any additional documentation requested by the assessor should be sent as soon as possible after the assessment (usually within one week, unless otherwise agreed upon with the assessor). It is important to communicate any delays in the delivery of this documentation. The assessor cannot give credit for any items that cannot be validated. Delays in document submission will result in delays to the Stage II On-Site Assessment Report and Green Globes certification. Please note that failure to deliver supporting documentation within a reasonable time frame will result in the report being issued without the associated points.

Third-Party Report

Upon receiving all additional documentation, the assessor will make any last updates to the Post Construction survey. The assessor will use his/her professional judgment as necessary to account for any non-applicable criteria that cannot be accommodated by the online survey and will identify the resulting Green Globes score and rating. Within four weeks of the site visit (or four weeks after the receipt of any missing documentation, whichever is later), the assessor will create a detailed Stage II On-Site Assessment Report and submit it to GBI for review. The report contains the official Green Globes score, rating, and logo. It identifies any discrepancies between the client's version of the Post Construction survey and the assessor's version and contains recommendations for future sustainability improvements.

	2015 Green Globes for New Construction Stage II On-Site Assessment ACME Supermarket Mark Russell Wise Built, LLC 4/13/2015	VERIFIED BUILDING FEATURES PROJECT MANAGEMENT - Integrated Design Process (IDP) - Pre-Design Meetings – A variety of meeting minutes were provided to demonstrate that an integrated process was used in the pre-design phase. The minutes included: Town of DeWitt – Planning Board dated 8 Sep 2011, Site Plan Review Comments dated 10 Oct 2011, and the Planning Board of the Town of DeWitt dated 10 May 2012. - IDP Performance Goals – Construction Specification 017300 Execution established a construction waste diversion goal of 50% by weight. - IDP Progress Meetings for Design – Regular progress meetings were held with the Town of DeWitt Planning Board. Meeting minutes were provided from 8 Sep 2011 and 10 May 2012. - Capital Asset Plan & Business Case Summary – This project is a non-Federal building so this category is considered “not applicable.” - Environmental Management During Construction - Environmental Management Systems (EMS) – Drawing C0.0 General Note contractor’s environmental policy along with regulatory compliance required the drawings provide the requirements for site work and environmental construction. - Clean Diesel Practices – No points were attempted for this credit. - Building Materials and Building Envelope – The following construction specifications details on preventing moisture absorption for building materials and air performance of the building envelope: 016000 Product Requirements, 050600 Rough Carpentry, 072100 Thermal Insulation, 084113 Aluminum-Frame Storefronts, 088000 Glazing, and 092900 Gypsum Board. - Indoor Air Quality (IAQ) During Construction – No points were attempted for this credit. - Commissioning - Pre-Commissioning – No points were attempted for this credit. - Whole Building Commissioning – No points were attempted for this credit. - Training – No points were attempted for this credit. - Operations and Maintenance (O&M) Manuals – Operations and maintenance manuals were observed in the store manager’s office during the on-site visit. Scored 16 out of 48.5 applicable points for 33.0%	SUMMARY Verification of the self-assessment and modifications by the assessor resulted in a final score of 427 out of 815 applicable points, which equates to 52.4% and a One Green Globe rating for the ACME Supermarket in Fayetteville, NY. This level of sustainability is a notable accomplishment, and you should be proud of the manner in which you approached the design and construction of this facility. Sustainability is a dynamic process that continues for the lifetime of a building. After 12-18 months of occupancy, the facility’s operations & management policies can be evaluated under the Green Globes for Existing Buildings program. The minimum length of occupancy mentioned above is required to evaluate utility bills and usage data and track building performance over time. Collection and analysis of operational data is essential to monitoring the achievement of building performance goals. If you have any questions about this report, please contact me at (555) 555-5555 or assessor@gmail.com. Sincerely,  Mark D. Russell, PhD, PE	RECOMMENDATIONS This section contains recommendations that may enhance the sustainability of this building and/or be applied to future projects. PROJECT MANAGEMENT - Integrated Design Process - The establishment of pre-design qualitative goals related to the site design, building envelope, material efficiency, and indoor environment can provide a framework for future environmental performance and efficiencies that can be achieved at the property. - Measuring and establishing performance goals for energy efficiency, renewable energy, greenhouse gas emissions, water conservation, and life cycle impact can provide a baseline against which to verify subsequent program improvements. In addition, performance goals establish a corporate attitude that can further promote sustainable practices for all employees. - Employing an integrated design process at each phase of design and construction can bring about efficiencies that help to reduce the cost of sustainable design while improving the building performance. On future projects, specific requirements to participate in an integrated process throughout the project development could be included in the concept design and construction documents. - Environmental Management During Construction - An Environmental Management System (EMS) establishes the guidelines by which the site will be managed and evaluates the risk associated with construction activities and the appropriate means for mitigating the risk. The EMS should be developed as a written statement and be made available to subcontractors and site visitors. - By establishing the Clean Diesel practices of reducing vehicle idle time, using clean fuels, requiring engine upgrades, and keeping engine maintenance records, the construction process can generate less air pollution, improve engine efficiency, and reduce operating costs. - A building flush-out can be effective at removing contaminants that have been deposited during the construction process. It is recommended that a significant air exchange occur and/or air quality testing be performed to assure that the indoor air quality meets applicable EPA standards. - Commissioning - Documentation of the Owner’s Project Requirements (OPR) and Basis of Design (BOD) can ensure that the design is within specific parameters and provide a consistent document for all designs and operations. - Whole building commissioning has been demonstrated to provide significant savings by locating deficiencies and having them corrected immediately. Additionally, the process provides a benchmark for building performance that can be used to determine trends. Consider performing whole building commissioning, including items such as HVAC, building envelope, structural systems, fire protection, plumbing systems, electrical systems, communication systems, lighting systems, building automation systems, and noise isolation.
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GBI Report Review & Issuance

In the last step of the Stage II On-Site Assessment, GBI will review the report for consistency, for technical incongruence, grammar and aesthetics. We will notify the assessor regarding any clarification requests or needed updates. If required, the assessor will update the report and submit to GBI. We will review the report to ensure the updates are complete. Once approved, we will issue a PDF of the final assessment report to the project manager by email.

Upon receipt, the project manager is responsible for reviewing the report and identifying any areas in which they have questions or would like clarification. If there are any noted discrepancies, they must contact both the assessor and GBI within two weeks and provide documentation that supports additional credit. The assessor and GBI will promptly address any discrepancies. For additional details, please refer to the [GBI Assessment Discrepancy Resolution & Appeal Guidelines](#).

BENCHMARKING & EB CERTIFICATION

As previously explained, the intention of the Green Globes NC program is to evaluate sustainable design and intended building performance. Therefore, the logical next step is to evaluate operations, management, and actual building performance during occupancy. GBI recommends that all buildings certified under Green Globes NC start tracking and benchmarking energy and water performance data within the Green Globes EB online evaluation immediately after the initial “data normalization period” (usually after the first six months of occupancy). Creating a baseline of the building’s actual performance and tracking ongoing data helps owners/facility managers track their return on investment in sustainable measures and develop action plans to further improve sustainability. Building owners/managers are encouraged to track performance data for three consecutive years and then pursue formal third-party assessment and EB certification. This three-year cycle of benchmarking and Green Globes assessment is intended to continue over the entire service life of the building. Specific information about the Green Globes EB program and process can be found in Section 8 of the GGP training manual.