

# Cleveland Green Building Standard Handbook

Cleveland Department of Community Development

Published February 7, 2009; Revised October 5, 2009; Revised January 28, 2010; Revised June 1, 2016; Revised December 5, 2017

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## **INTRODUCTION**

On November 14, 2007, Mayor Frank G. Jackson announced the creation of the Cleveland Green Building Standard. In his remarks he said, “The City of Cleveland is working to make Cleveland a city of choice. In doing so, Cleveland seeks to provide affordable housing that reduces the costs to home buyers & renters for heating & cooling, reduces the environmental impact of our communities, and provides universal access to the elderly and disabled. Cleveland will develop green building policies that help create houses that:

- Are affordable to operate and maintain;
- Are energy efficient;
- Healthy;
- Accessible and transit oriented;
- Reduce impact on the environment by managing stormwater run-off; and
- Provide green space for healthy communities”

This handbook is a reference guide for developers, builders, and homeowners who wish to meet the Cleveland Green Building Standard. The standard is designed to save homeowners money on utilities and create local green jobs, while also improving the health of the community and reduce our collective contribution to climate change. The Standard also creates direct benefits for developers and builders, including cost savings from efficient operation, a marketing advantage, and public recognition for high performance homes.

## **CLEVELAND GREEN BUILDING STANDARD**

Beginning January 1, 2010, to qualify for residential tax abatement under Cleveland’s Community Reinvestment Area (CRA) tax abatement program, all new construction and rehab projects must meet the Cleveland Green Building Standard. Residential projects seeking tax abatement that receive permits after March 1, 2018 must meet the requirements in the 2017 revision to this Handbook. Property tax abatement is available for the increase in property value.

The Standard is based on the nationally recognized green building rating systems of Enterprise Green Communities, the U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED), the National Green Building Standard, ENERGY STAR v3, Passive House Institute US (PHIUS+), and the Living Building Challenge.

Projects receiving assistance must meet one of five compliance options described below. Projects must meet the most current version of each program listed. Certification information must be

provided on the tax abatement application. Table 1 summarizes eligibility by building type.<sup>1</sup> Regardless of the compliance path selected, all projects must meet the mandatory requirements set forth in Criterion 2, Location + Neighborhood Fabric, of the 2015 Enterprise Green Communities Criteria.

**OPTION A: Enterprise Green Communities Certification – Affordable Housing**

Affordable housing new construction and rehabs receiving assistance must earn Enterprise Green Communities certification, through its most recent criteria. Certification is available only to projects that include affordable dwelling units. Note that 1-4 unit residential rehabs may submit a waiver through Enterprise with respect to the requirement for a Phase 1 Environmental Assessment. More information at: [www.enterprisecommunity.com/enterprise-green-communities](http://www.enterprisecommunity.com/enterprise-green-communities).

All projects using Enterprise Green Communities must hire a third party Verifier. See Appendix A for more info.

**OPTION B: Enterprise Green Communities Compliance**

Market rate projects must demonstrate compliance by: (1) meeting all applicable mandatory Enterprise Green Communities criteria, (2) achieving 35 points for new construction and 30 points for substantial and moderate rehabs, and (3) achieve third party certification for energy efficiency. See Appendix B for the list energy requirements to meet Enterprise Green Communities Compliance for different building types.

Note that 1-4 unit residential rehabs may submit a waiver through Enterprise with respect to the requirement for a Phase 1 Environmental Assessment. More information at: [www.enterprisecommunity.com/enterprise-green-communities](http://www.enterprisecommunity.com/enterprise-green-communities).

Market rate projects using Enterprise Green Communities must hire a third party Verifier and submit the “Enterprise Green Communities Certification Form” developed by the City of Cleveland (see Appendix A). Download the Excel-based form here: [www.city.cleveland.oh.us/CityofCleveland/Home/Government/CityAgencies/CommunityDevelopment/TaxAbatement](http://www.city.cleveland.oh.us/CityofCleveland/Home/Government/CityAgencies/CommunityDevelopment/TaxAbatement).

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<sup>1</sup> The Director of the Department of Community Development, with written request and upon recommendation made by Housing Development Office staff and the Housing Officer, may waive or modify certain Green Building Standard Handbook requirements in cases demonstrating hardship or extenuating circumstances that prevent the project from meeting one or more of the technical requirements of the Green Building Standard Handbook, but where the project demonstrates overall compliance with the general quality and standards of the Green Building Standard Handbook. When evaluating a waiver or modification, the Director of the Department of Community Development will review the circumstances and hardships described, and may request additional information or documentation to determine cost and feasibility of compliance; health, environmental, and equity implications of the request; and any other potential factors relevant to the waiver or modification requested. If the Director of the Department of Community Development determines that the project could meet the intent of the Green Building Standard Handbook requirement by other means, the Director of the Department of Community Development may propose an alternative method of compliance. See Enterprise Green Communities Certification: The Details (December 29, 2015), <https://www.enterprisecommunity.org/sites/default/files/media-library/solutions-and-innovation/green/certification-infographic-2015-12-29.pdf>. If a waiver or modification to a requirement set forth in the Green Building Standard Handbook is requested only for purposes of participation in the CRA tax abatement program, and for no other purpose, the Housing Officer may waive or modify such Green Building Standard Handbook requirement, upon recommendation made by Housing Development Office staff, or propose an alternative method of compliance, pursuant to the procedures and criteria described above.

### **OPTION C: LEED Silver Certification**

New construction projects and rehabs receiving assistance must earn LEED Silver certification at a minimum. Depending on project scope and size, the project will select between LEED–HOMES and LEED–BD+C.

All LEED for Homes certified projects are third-party verified. The verification team includes a Green Rater and a Provider who work together on the verification and certification submittal of your project. Green Raters visually verify as-built LEED measures and collect supporting documentation. Performance testing is required and conducted onsite by a qualified third-party. Once your project is complete, you are ready to apply for certification. More information on LEED certification can be found here: [www.usgbc.org/leed](http://www.usgbc.org/leed).

### **OPTION D: National Green Building Standard (NGBS) Certification**

New construction and rehab projects receiving assistance must earn NGBS Silver certification at a minimum and use the “Performance Path” to meet energy requirements. All Single Family and Multifamily Low-Rise must complete a blower door test. Multifamily projects must follow the accepted protocols by EPA and RESNET for earning ENERGY STAR v3.

The project team submits an online checklist and hires a NGBS accredited Verifier to conduct field inspections and perform testing during a minimum of two site visits, one before drywall and another near project completion. The Verifier also verifies all credits earned. More information at: [www.homeinnovation.com/services/certification/green\\_homes](http://www.homeinnovation.com/services/certification/green_homes).

### **OPTION E: Advanced Building Certification Programs**

New construction projects and rehabs receiving assistance can receive third-party certification from advanced building certification programs, including Passive House Institute US + (PHIUS+) and the Living Building Challenge. These projects should first consult with the Department of Community Development.

All PHIUS+ certified projects are third-party verified by a PHIUS+ Rater. Compliance is complete after on-site inspection and all reports are uploaded. Learn more at: [www.passivehouse.us/passiveHouse/PHIUSPlusChecklist/](http://www.passivehouse.us/passiveHouse/PHIUSPlusChecklist/).

The Living Building Challenge process consists of three steps: Registration, Documentation & Operation, and Audit & Certification. Learn more about the process here: <http://living-future.org/lbc/certification>.

Eligible building types for compliance Options A-D are summarized in Table 1 below.

**Table 1: Eligible Rating Systems by Building Type**

<i>Building Category*</i>	<i>New Construction</i>	<i>Substantial Rehab</i>	<i>Moderate Rehab</i>
Single Family and Multifamily Low-Rise (Affordable)	A: EGC certified through Enterprise C: LEED Silver D: NGBS Silver	A: EGC certified through Enterprise C: LEED Silver D: NGBS Silver	A: EGC certified through Enterprise D: NGBS Silver
Single Family and Multifamily Low-Rise (Market Rate)**	B: EGC compliant & energy req'ts C: LEED Silver D: NGBS Silver	B: EGC compliant & energy req'ts C: LEED Silver D: NGBS Silver	B: EGC compliant & energy req'ts D: NGBS Silver
Multifamily Mid/High Rise (Affordable)	A: EGC certified through Enterprise C: LEED Silver D: NGBS Silver	A: EGC certified through Enterprise C: LEED Silver D: NGBS Silver	A: EGC certified through Enterprise D: NGBS Silver
Multifamily Mid/High Rise (Market Rate)**	B: EGC compliant & energy req'ts C: LEED Silver D: NGBS Silver	B: EGC compliant & energy req'ts C: LEED Silver D: NGBS Silver	B: EGC compliant & energy req'ts D: NGBS Silver

\*The definitions in each rating system determine if a multifamily building is classified as low-rise, mid-rise, or high-rise. Use Enterprise Green Communities definitions to determine affordable vs. market rate.

\*\* See Appendices for EGC Compliance and energy efficiency requirements

*As noted above, regardless of compliance path selected, all projects must meet the mandatory requirements set forth in Criterion 2, Location + Neighborhood Fabric, of the 2015 Enterprise Green Communities Criteria.*

The City of Cleveland will classify rehabilitation projects involving substantial investment or creating substantial post-rehabilitation value as Substantial Rehabilitation projects. More specifically, for purposes of Enterprise Green Communities compliance, a “Substantial Rehabilitation” project is a project that meets one of the following descriptions: (1) the project’s work area exceeds 50% of the aggregate area of the building; (2) the project involves the replacement or improvement of at least two of the building’s major systems, including its envelope; or (3) the project fully exposes the structure and envelope of the building. All other rehabilitation projects are “Moderate Rehabilitation” projects.

While homeowners are encouraged to apply the Cleveland Green Building Standard to their entire home when undertaking major improvements, tax abatement is also available for:

- Home additions; and
- Projects creating unconditioned spaces (commonly garages, outbuildings or outdoor improvements).

Visit here for more

info: [www.city.cleveland.oh.us/CityofCleveland/Home/Government/CityAgencies/CommunityDevelopment/TaxAbatement](http://www.city.cleveland.oh.us/CityofCleveland/Home/Government/CityAgencies/CommunityDevelopment/TaxAbatement)

## QUALIFIED PROFESSIONALS

To meet the Standard, developers and owners of all homes constructed or rehabilitated must secure third party verification of compliance. Each of the qualifying Green Rating Systems has certified raters or professionals, summarized in Table 2 below for Options A-D.

**Table 2: List of Qualified Raters / Verifiers**

<i>Rating System</i>	<i>Raters / Verifiers</i>	<i>Link to Qualified Raters / Professionals</i>
Enterprise Green Communities	Cleveland Green Verifier As applicable: HERS Certified Rater, Other Qualified Professionals	<a href="http://www.city.cleveland.oh.us/CommunityDevelopment/TaxAbatement">www.city.cleveland.oh.us/CommunityDevelopment/TaxAbatement</a> (Click on 'Cleveland Green Communities Green Verifiers' link)
LEED	LEED for Homes Verification Team (Green Rater and Provider)	<a href="http://www.usgbc.org/people/green-raters">www.usgbc.org/people/green-raters</a> <a href="http://www.usgbc.org/organizations/members/homes-providers">www.usgbc.org/organizations/members/homes-providers</a>
NGBS Green	NGBS accredited Verifier	<a href="http://www.homeinnovation.com/services/certification/green-homes/resources/find_a_verifier">www.homeinnovation.com/services/certification/green-homes/resources/find_a_verifier</a>

In addition, if a program calls for a HERS Rating, then it must be a “confirmed” HERS Rating. To achieve compliance for Options A, C, D, and E, projects must submit the project checklist, unique project identifier, and other related documentation to Room 320 in Cleveland City Hall. See the Appendices for more information on Option B.

For each compliance option, the rater or verifier must be qualified to work on a particular project. For example, LEED projects require either a LEED for Homes Rater, LEED for Homes Provider, LEED AP or consultant who is partnered with one or more of these.

## APPENDIX A – Guide to meeting the Enterprise Green Communities Paths

The purpose of this appendix is to provide additional guidance on complying with Option A (Enterprise Green Communities Certification – Affordable Housing) and Option B (Enterprise Green Communities Compliance – Market Rate).

1. Hire a “Cleveland Green Verifier” that is familiar with the latest Enterprise Green Communities Criteria. The current list of Green Verifiers is on the Community Development website. Request a proposal that identifies services and outlines fees. If the Green Verifier is not a HERS rater or a qualified professional as specified for Midrise and Highrise buildings, they can help you hire one.
2. Meet with your Green Verifier to help clarify issues and answer questions on compliance.
  - Become familiar with the Enterprise Green Communities Criteria: [www.enterprisecommunity.com/enterprise-green-communities](http://www.enterprisecommunity.com/enterprise-green-communities)
3. During the design phase, work with your Green Verifier, design professionals, and the builder/contractor to create a Green Development Plan for your project. The Green Development Plan assures that all members of the project team and the City’s Design Review Committees understand the green goals for the project. The Plan should include documentation required by the Green Verifier to certify compliance, such as:
  - Inspection requirements
  - Blower Door test
  - Other documentation referenced in the criteria, such as receipts and photos, to ensure all mandatory points are met and at least 35 additional points for new construction (30 additional points for rehabs)
4. Implement the Green Development Plan
5. To finalize compliance, the process differs for Options A and B as follows:
  - Option A: Use the Green Communities Certification Portal (<http://enterprisecommunity.force.com/greenportal>) to complete the certification process and develop the final report. Contact Enterprise with questions concerning eligibility. Only projects with an affordable housing component are eligible for certification through the portal. Submit the “Enterprise Green Communities Certification Form” with required attachments, and signed by the Green Verifier.
  - Option B: Available only for projects not eligible for certification through the Portal. Submit the “Enterprise Green Communities Certification Form” with required attachments, and signed by the Green Verifier.

The Green Verifier is required to maintain all documentation related to compliance after project completion. For all options, certification information must be provided on the tax abatement application. All project documentation is subject to audit. If project documentation is not consistent with the tax abatement application, the City of Cleveland may terminate the tax abatement.

Documentation should be delivered to Room 320 in Cleveland City Hall, along with the tax abatement application. The Department of Community Development will determine if the application is approved and send a letter to the building owner. Questions can be directed to the Division of Neighborhood Development at 216-664-4000.

For each compliance option, the rater or verifier must be qualified to work on a particular project. For example, LEED projects require either a LEED for Homes Rater, LEED for Homes Provider, LEED AP or consultant who is partnered with one or more of these.

## **APPENDIX B – Energy Requirements to meet Enterprise Green Communities Compliance**

The following requirements apply to **NEW CONSTRUCTION** for these project types:

- Single-family detached and attached homes
- Multifamily buildings with four dwelling units or fewer
- Multifamily buildings with three stories or fewer
- Multifamily buildings with up to five stories, where each dwelling unit has its own heating, cooling and hot water system

### REQUIREMENTS

Certify each dwelling unit in the project through the ENERGY STAR New Homes program. Use the appropriate specification version of ENERGY STAR New Homes depending on when the project is permitted, when construction will be completed and local ENERGY STAR guidelines. To determine the appropriate specification version for each project: [www.energystar.gov/homes](http://www.energystar.gov/homes).

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The following requirements apply to **NEW CONSTRUCTION** for these project types:

- Multifamily buildings with four or five stories wherein each dwelling unit does not have its own heating, cooling and hot water system
- Multifamily buildings with six or more stories

### REQUIREMENTS

#### **Option 1**

Certify the project through the ENERGY STAR Multifamily High Rise program (MFHR).

**OR**

#### **Option 2**

First, follow either the ENERGY STAR MFHR prescriptive path design details or perform modeling per the ENERGY STAR MFHR performance path to demonstrate that the project will perform at least 15% better than the baseline code designated by the ENERGY STAR MFHR program. For projects outside of California, this baseline code is ASHRAE 90.1 per Appendix G; refer to the latest ENERGY STAR MFHR guidance to determine which version of ASHRAE 90.1 is applicable for your project.

Second, for verification of the above measures, follow the LEED for Homes v4 EA Prerequisite: Minimum Energy Performance Midrise Prescriptive Commissioning Path.

*NOTE:* Option 2 is available only if approved in advance by the City of Cleveland as part of a Green Development Plan. The project team must include a LEED AP for Homes or a LEED Green Rater with experience that includes at least two LEED certified projects. The LEED AP

for Homes or LEED Green Rater must certify that all requirements are met – contact the City for specific Certification documents and requirements.

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The following requirements apply to Moderate or Substantial **REHABS** for these project types:

- Single-family detached and attached homes
- Multifamily buildings with four dwelling units or fewer
- Multifamily buildings with three stories or fewer
- Multifamily buildings with up to five stories, where each dwelling unit has its own heating, cooling and hot water system

### REQUIREMENTS

For each dwelling unit in the project types identified above, achieve a HERS Index score of 85 or less.

*EXCEPTION:* Moderate or Substantial rehabs of buildings built before 1980 with walls made only of brick/masonry that are three stories or fewer (or four or five stories, where each dwelling unit has its own heating, cooling and hot water system) are permitted to instead achieve a HERS Index score of 100 or less for each dwelling unit.

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The following requirements apply to Moderate or Substantial **REHABS** for these project types:

- Multifamily buildings with four or five stories wherein each dwelling unit does not have its own heating, cooling and hot water system
- Multifamily buildings with six or more stories

### REQUIREMENTS

Demonstrate that the energy performance of the completed building will be equivalent to ASHRAE 90.1- 2010 using an energy model created by a qualified energy services provider according to Appendix G.

*For purposes of Enterprise Green Communities compliance, a “Substantial Rehab” is a project that meets one of the following descriptions: (1) the project’s work area exceeds 50% of the aggregate area of the building; (2) the project involves the replacement or improvement of at least two major systems of the building, including its envelope; or (3) the project fully exposes the structure and envelope of the building. All other rehabilitation projects are “Moderate Rehabs.”*