



Home Innovation
NGBS GREEN PARTNER™

BUILDER'S RESOURCE GUIDE

OCTOBER 2023

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Dear NGBS Green Client:

Thank you for considering NGBS Green certification. When we launched NGBS Green in 2009, few thought we could deliver a certification program that was credible **or** rigorous **or** affordable **or** lasting – let alone **all** those qualities. I am proud of what we have accomplished.

Over 420,000 homes and multifamily apartments have earned NGBS Green certification as of June 2023, and over 450,000 homes apartments are in process to earn certification.

NGBS Green is the preferred green certification for those who build or renovate the buildings we live in.

The 2020 NGBS is the best version of the **National Green Building Standard®** yet with several notable improvements, including:

- Expanded scope to allow certification for commercial portions of mixed-use buildings, assisted living facilities, dorms, and hotels
- Streamlined compliance path for single-family homes, townhomes, and duplexes
- Water efficiency performance path that calculates a water rating relative to a baseline home
- Existing building provisions that offer a choice of compliance paths.

We've also begun development of the 2024 NGBS, our fifth NGBS version since the program launched. The 2024 NGBS consensus process is scheduled to be wrapped up by the middle of 2024.

Our **NGBS Green Scoring Tools** have new and improved functionality; **NGBS Green Pro** training is available for industry professionals; **NGBS Green+** certification options can be selected that address wellness, net zero energy, and resiliency; and we enhanced our listing of **NGBS Green Certified products**. We also rolled out our water efficiency certifications, the **Water Rating Index (WRI)** and are an EPA-approved certification agency for **WaterSense**.

The NGBS Green certification program now runs on the AXIS online platform which streamlines participation in the program and enhances client benefits. AXIS provides clients with greater access to NGBS Green certified and in-process projects. As more investors look for companies with strong **ESG commitments**, NGBS Green certification continues to provide the industry with a rigorous and independent certification of sustainability and performance. Look for many more ESG enhancements to be rolled out this year.

Every certification offers us an opportunity to improve, to bring more value to clients, and to help you build a better home. Our promise is that when you see the NGBS Green Certified mark, you are confident the building meets the NGBS's rigorous requirements.

We will work with you to bring the most value for the lowest cost. Want us to do something differently? Email (mfooster@homeinnovation.com) me. We look forward to serving your green certification needs.

Best,



Michelle Foster

Vice President, Sustainability
Home Innovation Research Labs

TABLE OF CONTENTS

Quick Start Guide.....	1
NEW TO GREEN? We're Here to Help!.....	1
Home Innovation Research Labs.....	1
ICC 700 National Green Building Standard®.....	1
Overview.....	1
NGBS Compliance Requirements	2
Score the Project	2
How to Select an Accredited Verifier	3
What to Expect from Verifier Inspections	4
Schedule the Verification	4
The Verification Inspection.....	5
The AXIS NGBS Green Portal	6
Project Registration	6
NGBS Green Client Agreement.....	6
Who is the "Client" in the NGBS Green Certification Process?	7
NGBS Green Certification Fees.....	7
Invoices.....	7
Insurance Requirements.....	8
Blanket Additional Insured Endorsement	9
Developer Signs Client Agreement, General Contractor Holds Insurance	9
An Insurance Primer	10
Reconciling Differences: Local Code vs. NGBS Requirements.....	11
Appeals Process	11
Defining a Building.....	12
Modular Buildings.....	16
NGBS Green Verifiers are Independent, Third-Party Inspectors	16
Get the Maximum Value Out of NGBS Green Certification.....	17
NGBS Green Marketing Resources.....	17
NGBS Green + Badges.....	17
WaterSense Certification.....	18
FTC Green Guidelines Information	20
Incentives & Mandates.....	20
Get a Qualified Appraiser	21

APPENDIX A: Home Innovation Staff

APPENDIX B: NGBS Green Certification Resources

APPENDIX C: NGBS Green Certification Program Policies

APPENDIX D: NGBS Green Multifamily Project Information To Be Collected

APPENDIX E: NGBS Green Certification Client Application (Sample)

Quick Start Guide

The **Builders Resource Guide** (BRG) has the information you need to earn NGBS Green certification.

[The Quick Start Guide](#) is an overview if you are short on time.

NEW TO GREEN? We're Here to Help!

If you want an in-person overview, [contact us](#) to schedule a FREE 30-minute consultation with a member of our green team to get started.

Home Innovation Research Labs

Home Innovation Research Labs (Home Innovation) was founded in 1964 as a small product testing laboratory. Over our 59-year history we have grown to become a full-service market research, consulting, product testing, and accredited third-party certification agency dedicated solely to the home building industry. Our Maryland headquarters is a 25-acre research campus which includes a state-of-the-art product testing and market research facility.

Home Innovation is an accredited standards development organization and has ushered many standards through the American National Standards Institute (ANSI) consensus process. During this process we ensure that participation is open to interested stakeholders, interests are balanced, public input is sought, and appeals are heard. The ANSI process requires ongoing maintenance for ANSI-approved standards to ensure the content reflects the most current information on technology and other industry elements. Home Innovation oversees the development and maintenance of the **ICC 700 National Green Building Standard®** (NGBS) to ensure ANSI's rules are followed.

Home Innovation serves as NGBS Certification Agency and provides certification services nationwide through the NGBS Green program. Our core competency as an independent, third-party product testing and certification lab makes us uniquely suited to oversee a green certification program.

ICC 700 National Green Building Standard®

Overview

The NGBS is the only green building rating system designed solely for residentially occupied buildings, approved by ANSI as an American National Standard, and an International Code Council's building codes.

The NGBS assigns points to green practices. A building can attain one of five performance levels — Certified, Bronze, Silver, Gold, or Emerald. For a building to attain any certification level, applicable mandatory provisions must be implemented. In addition, the building must include sufficient green building practices to meet the point requirements for the desired certification level.

The NGBS provides the industry and consumers with a credible definition of green building. It's flexible, expansive point-based system for certification offers an affordable process to build green homes.

The NGBS applies to all residential buildings, including:

- single-family homes
- townhouses
- duplexes
- triplexes
- quads
- assisted living facilities and seniors housing
- rescue squad housing; homeless shelters
- mixed-use and multifamily buildings (no height limitation)
- hotels and motels
- student housing and dorms

Under the 2020 NGBS, commercial space of mixed-use buildings can earn the ‘Certified’ recognition. The residential portion must be > 50% of the building’s conditioned square footage. There are two certification options — ‘Core and Shell’ and ‘Fully Fitted Out.’ Core & Shell addresses only the building envelope and fenestration. Fully Fitted Out can be achieved once the non-residential space is completed.

The NGBS covers new construction and existing buildings. For existing buildings, the original or current building’s use is irrelevant; if the building is renovated to accommodate residents, the building can earn NGBS Green certification.

The NGBS also applies to land development of any size. It can be used to certify a residential subdivision of a few lots, a 20,000-acre new community, or anything in between.

NGBS Compliance Requirements

The six categories of green practices in the NGBS are:

- Lot & Site Development
- Resource Efficiency
- Energy Efficiency
- Water Efficiency
- Indoor Environmental Quality
- Homeowner Education

To be certified, new buildings must meet the minimum point threshold levels in every green building practice category (see above). This requirement ensures the building will reduce its environmental impact in all areas. The NGBS is not simply a design standard; it includes green building practices for design, construction, verification, and operation which helps ensure that buildings **designed** to be sustainable and high performing are **built and occupied** in a sustainable method.

For new construction, higher certification levels require a new building to earn more points in every category of green building practices.

Alternatively, single-family homes or duplexes can earn the Certified level by following the 2020 NGBS Chapter 12 certification path if the homes incorporate all applicable 2020 NGBS Chapter 12 practices.

Score the Project

The NGBS Green Scoring Tool, available for free at www.HomeInnovation.com/GreenScoring, is an easy-to-use tool for architects, builders, and developers. The Tool is an Excel-based spreadsheet that includes NGBS practices and points. Anyone can complete the scoring tool by claiming certification points based on the practices and products to be incorporated into the building.

Scoring tools are updated frequently, so we recommend downloading a new scoring spreadsheet for each project. The NGBS Green Verifier will use the Scoring Tool as a verification checklist to confirm the building’s NGBS compliance.

Simplifying Certification with the Bronze Cookbooks

The NGBS has many compliance options. How do you decide what NGBS practices are the most cost-effective? To help new green builders, Home Innovation created the **NGBS Bronze Cookbooks**.

The "cookbook" shows which practices are most frequently incorporated for NGBS Green certification. Home Innovation pre-populated an NGBS Green Scoring Tool with the most used practices used to achieve Bronze-level certification. Given the widespread use of these practices nationally, you can assume they represent the most cost-effective green practices for residential construction. Where appropriate, notes are included regarding NGBS Green Certified Product options which can further simplify the certification process.

The Bronze Cookbook can streamline what can otherwise be a complex and extensive decision-making process. Download the NGBS Bronze Cookbook: www.HomeInnovation.com/BronzeCookbook.

How to Select an Accredited Verifier

Rigorous verification is a hallmark of NGBS Green certification.

NGBS Green verification is straightforward and affordable. Our national network includes 340+ accredited NGBS Green Verifiers. Home Innovation qualifies, trains, and tests prospective verifier candidates. Verifiers must have previous experience in residential construction and green building before being accepted into the verifier training program. Verifiers are then trained to inspect every conceivable residential project for NGBS compliance. Once training is complete, verifiers must pass a stringent test to assess their NGBS expertise, the certification process, and building science. Before bestowing our accreditation, Home Innovation confirms the verifier is adequately insured. Verifier accreditation is renewed annually, and re-accreditation (training and testing) is necessary for each NGBS version.

Verifiers serve as independent, third-party inspectors and, as such, set their own competitive verification prices and negotiate their own contracts. Verifiers may also provide other services in conjunction with NGBS Green verification, such as energy modeling or code compliance inspections, which may impact the fees charged.

An experienced verifier can help your project team get the most value from verification. Don't endure verification; embrace it! Verifiers can help you deliver a high-quality, high-performing real estate asset.

[Here are five easy tips to maximize the value of NGBS Green verification](#)

1. Select a Verifier Early

Accredited NGBS Verifiers are listed here: www.HomeInnovation.com/FindNGBSVerifier.

Interview Verifiers as early as possible. NGBS Green accredited Verifiers are trained to verify any project type (land development, multifamily, single family, renovations), but many have specific expertise, so speak with a few before making a final selection.

Single-family builders will want to select an accredited verifier located nearby to minimize travel costs. Multifamily and land development clients should interview verifiers with relevant expertise as it may be more advantageous to hire a Verifier expert in multifamily construction or land development practices, rather than someone merely for their proximity to the site. Verification costs for larger projects are a small percentage of total construction costs and, as a result, can more easily absorb travel costs. Further, verifiers with multifamily experience may be more cost-effective in their verification services pricing because of experience.

Inform prospective verifiers if you intend to seek certification for more than one project, as the verifier may offer more competitive pricing when establishing a long-term relationship.

2. Meet & Consult with Your Verifier...

Before construction starts to review the NGBS Green checklist. Note the mandatory practices required for certification. Review the checklist so the Verifier can inform the team which practices are checked at the rough inspection, and which are checked at the final inspection. Understand what documentation the verifier will need. Verifiers can typically suggest the most cost-effective and easy-to-implement practices. Confirm the project point total and points required by category to see what certification level (Bronze, Silver, Gold, or Emerald) you can attain. Earn extra points in each category just in case your verifier doesn't approve all the points you need for a certain certification level.

3. Build a Documentation Library

Experienced builders have a set of green practices and products they rely on repeatedly. Create Master Documentation Folders, electronic or physical, organized by NGBS practice for reference for future projects.

4. Get the Whole Team on Board

Attaining NGBS Green certification for your projects is a team effort. Get everyone on board early. Communicate your goal to have the project certified. Tell your staff, subs, trade partners, and contractors what is necessary from them in clear, specific terms. For example, if you need your contractors to use low-VOC adhesives and sealants, make sure they understand the specific VOC limits they need to meet. Your window supplier should understand that last-minute substitutions that do not meet NGBS requirements could jeopardize certification. Provide training, if necessary, on specific issues such as keeping HVAC supply registers covered during the construction process. Make sure everyone understands that the project will be inspected by a verifier who will occasionally be on site.

Include your marketing and sales team in the effort! Too often the construction teams fail to coordinate with the marketing team, so buyers and renters never learn about the property's great green benefits.

5. Review, Improve, Repeat

After you receive your first green certification, debrief with your team and Verifier to figure out what worked well, what could be improved the next time, and how to streamline the process. Many NGBS Green clients have found that going through the certification process not only helps them construct better homes, but also helps them improve their business processes.

What to Expect from Verifier Inspections

Each building seeking NGBS Green certification needs to be inspected by the verifier at least twice — once before the drywall is installed; once when the building is complete. For multifamily buildings, the verifier will need to inspect every unit as well as the common space. As a result, larger multifamily buildings are likely to require the verifier to visit the site several times to inspect each unit and confirm the NGBS practices. If testing and other credits are pursued that require scheduling and complex timing coordination with your team, provide the verifier access to your construction schedule and anticipated timing of trades.

Verifiers will need access to the entire building and project site. They are expected to follow construction site safety rules and use common sense during their inspection.

Schedule the Verification

Builders or construction site superintendents should work with the verifier to schedule the inspections in a timely fashion. If drywall is installed before the rough inspection resulting in the verifier being unable to verify practices behind the wall, the project will not be able to attain certification.

Does the same verifier have to perform the rough and the final inspection? No. Different Verifiers can perform the inspections and submit the inspection reports. The only requirement is that the inspections are performed by currently Accredited Verifiers. We ask that the client shares the scoring spreadsheet and any verification reports to each verifier directly.

Verification Inspection

The verification report includes all NGBS Green practices for which the project is claiming certification points. The verification report details what practices are confirmed at the rough inspection and what is confirmed at the final inspection. During the inspection, the verifier will walk through the building and project site to visually inspect each green practice. At the rough inspection, the verifier will ask for documentation necessary for the verification. As a best practice, have your verifier review pertinent submittals, drawings, and other documents prior to the start of construction.

Verifiers have specific instructions as to how to complete an NGBS Green inspection. Verifiers can only award points toward certification if they are confident the practice is met. Verifiers typically verify the practice visually during the inspection. Verifiers cannot award points for an incomplete practice, even with assurance that the practice will be completed in the future. A few NGBS practices are verified using documentation, and the verifier can inform you in advance as to what documentation is necessary.

The verifier must take at least one photo of the building seeking certification that shows a portion of the surrounding lot, however, the verifier may take many photos as part of the verification process. The verifier will note the date and time of the inspection on the report.

After the inspection is complete, the verifier will upload the verification report to AXIS, our online portal.

Home Innovation will review verification reports within days of receipt. If Home Innovation has questions, we will contact the verifier immediately. If the verification report is for a rough inspection and there are no issues, or if the issues are resolved satisfactorily, construction should proceed normally until the final inspection. If the final verification report is accurate and complete, and we have a complete Client Application including a current certificate of insurance (COI) and certification fee, Home Innovation will issue the NGBS Green certificate within one week.

Where to Get Help:

Home Innovation typically interacts directly with the verifier, not the client, however, anyone can contact Home Innovation (www.HomeInnovation.com/NGBSGreenContact) with questions about the NGBS, certification process, technical questions, or issues with any accredited verifiers.

The AXIS NGBS Green Portal

Home Innovation uses AXIS as the online portal for NGBS Green certification. On AXIS, Verifiers register projects; submit verification reports and compliance documentation; Clients sign and complete program agreements; access certification fee invoices; and monitor project status in real-time 24/7/365.



Clients must **register for an AXIS account**. The [account registration video](#) can get you started. After, the [NGBS Green Portal START HERE](#) page is a good orientation for those new to the portal. [“Getting Started” videos](#) are also good for the unexperienced, but you must have an account to access these videos.

AXIS will send email notifications for key stages of the NGBS Green certification process. Clients can see program notifications in the AXIS platform on their unique dashboard. Customize what notifications you want to receive via email from the AXIS portal.

Project Registration

Registration is mandatory and free. Verifiers register projects in AXIS as soon as they sign a contract to provide verification services for the project.

At registration, each building or land development is assigned a unique Project ID. Use this Project ID for any correspondence with Home Innovation.

Clients seeking a HUD Green MIP reduction can send the registration confirmation to HUD as proof the building(s) is/are seeking NGBS Green certification.

NGBS Green Client Agreement

Clients must complete a Client Agreement (CA). Completing the agreement in a timely fashion streamlines the process. Without a complete agreement, the Verifier cannot upload verification reports for the building to AXIS.

A sample Client Agreement is in the Appendix E for review purposes.

After registration, new clients will receive notification to complete a Client Application. The client will complete and sign the agreement using DocuSign. Clients can upload the required proof of insurance to AXIS. Once the COI is uploaded and the client signs the agreement, Home Innovation will countersign using DocuSign and the client can access the final agreement in AXIS. Only one application is needed, regardless of how many projects seek certification, provided the business structure of the signatory continues to take responsibility, financial and otherwise, for projects seeking certification. Agreements are good for four years.

A complete application and current proof of insurance that meets the requirements below is required for any project seeking certification. **No exceptions.**

Clients with active projects will receive an AXIS notification when the agreement or COI is about to expire and after it has expired.

Who is the "Client" in the NGBS Green Certification Process?

The client is the entity that takes responsibility – financial, compliance, and otherwise – for projects seeking certification. The client's name is typically listed on the NGBS Green certificate.

For single-family homes, the builder is typically the client and completes the CA and submits their proof of insurance.

For multifamily projects, the client may be the architect, the owner, the developer, or the general contractor. The Verifier will specify the client at registration. Home Innovation needs (1) a Client Agreement to be completed and (2) proof of insurance. The Agreement may be signed by a different entity than the insurance holder (see details below).

Only one application is needed, regardless of the number of projects submitted for certification. If a client is operating as a separate limited liability partnership or limited liability company for each construction project; clients in those types of situations may choose to sign a new agreement for each discrete business entity AND submit a separate COI for each project.

NGBS Green Certification Fees

Projects incur two separate fees: the verification service fee and the certification fee.

Accredited Verifiers set their own fees. Verifier fees vary; clients are encouraged to get multiple bids for verification services. Clients contract directly with a Verifier and pay the verification fees to the Verifier's company.

Projects must pay a certification fee to Home Innovation. Certification fees are listed [here](#).

Invoices

An invoice for the certification fee is automatically generated (but not sent) in AXIS after the Verifier submits the rough verification report and a notification to both Verifier and Client is created. Please note that because the AXIS notifications can be customized by the user, some individuals will get an email notification and others may only get an in-system notification.

AXIS generates an invoice for each building seeking certification. The Client or the Verifier must go into AXIS to download the invoice. We are working on a new AXIS feature where the invoice will be automatically sent when it is generated, but that functionality is not yet released.

The Verifier or Client can go into AXIS to generate an invoice at any time before the rough verification report is submitted IF the Client Agreement (CA) is completed (because Home Innovation needs the information in the Client Agreement to complete the invoice). Clients and Verifiers can also customize the invoice to include multiple buildings as desired. Clients with multiple buildings seeking certification may wish to customize their invoices.

Anyone can pay the certification fee, but the invoice must have the same name as the company that signed the CA. Certification fees are non-refundable and must be paid before the NGBS Green certificate is issued.

Insurance Requirements

Home Innovation requires clients to have insurance that meets the following requirements:

1. General liability of at least \$1 million.
2. "Home Innovation Research Labs" must be listed as an additional insured.
3. "Home Innovation Research Labs" must be listed as a certificate holder.

Home Innovation Needs to be Additional Insured

An "Additional Insured" is a party listed on an insurance policy that has some type of liability interest in the property. The "Additional Insured" has no right or authority to make policy changes or to cancel the policy. An "Additional Insured" is ONLY afforded liability protection under the liability portion of the policy and there is no coverage for physical losses resulting from vandalism, theft, fire, wind, hail, and so on. In some cases, there is confusion between what we ask, to be an "additional insured", and an "additional named insured" (which we don't ask).

For example, if a property is seller-financed, the seller holds the mortgage note and they are listed as an "Additional Insured" on the policy instead of as a mortgagee, then in the event of a physical loss (the home burned to the ground), the seller has no legal right under the policy to receive claim funds to pay off the mortgage debt and/or there is no control of managing claim funds to ensure repairs.

If there is litigation involving the property or its use and the "Additional Insured" is named in the suit for any reason, the policy provides liability protection for legal and defense costs for the "Additional Insured" and the insurance company issuing the coverage would have a 'duty to defend' any and all "Additional Insured parties" listed in the policy. The most common example of this involves commercial policies, such as general liability. Home Innovation, for instance, may be listed as an "Additional Insured" on a builder or a developer's insurance so that in the event of a liability claim caused by the builder/developer (such as faulty work, property damage, or bodily injury) where Home Innovation is also listed in the claim, Home Innovation would receive coverage for legal and defense costs from the builder's policy.

Insurance companies routinely provide this coverage. Also, if your General Liability policy provides additional insured status when it is required in a written contract or agreement, such as the agreement you sign with Home Innovation, then a COI with said provision displayed would satisfy the requirements and should be submitted.

If you or your insurance company has an questions, please [contact us](#).

Blanket Additional Insured Endorsement

Some insurance policies have a blanket additional insured endorsement which adds any entity, with whom the insured has signed a contract, with an additional insured requirement. Therefore, if the client has insurance with such an endorsement, **and** they have signed the Home Innovation CA, they should upload into AXIS the COI **and** that endorsement statement to demonstrate compliance.

It will say something like:

[CLIENT NAME] at [address]: Any Persons or Organizations that the Named Insured is obligated pursuant to written contract or agreement between the Named Insured and such person or organization by this policy is an Additional Insured under General Liability, but they are insured only if to the minimum extent that such contract or agreement requires the person or organization to be afforded status as an insured.

If we receive a COI and the blanket endorsement above from the policy, the client is compliant.

Developer Signs Client Agreement, General Contractor Holds Insurance

Home Innovation can accommodate when the developer signs the CA and the General Contractor (GC), who holds the liability insurance, names Home Innovation as an additional insured **if** the Verifier has correctly identified the two companies (developer and GC) in the AXIS registration.

Note the following exception: We cannot accept the General Contractor's COI if it specifies that Home Innovation is listed as an additional insured as required by a written contract because in the situation described above, the GC has NOT signed a contract with Home Innovation (the developer entity has signed the CA), and thus this clause means Home Innovation still is not covered by the insurance.

In this case, there are THREE options:

- (1) The insurance company removes the clause "required by a written contract" and a new COI is uploaded to AXIS,
- (2) The GC signs the CA instead of the developer organization, *OR*
- (3) If the non-signing entity (GC) adds the CA signing entity (developer) as a Named Insured to their policy **AND** Home Innovation as an additional insured, we can accept the "as required by written contract" language because that provides the CA signing entity with the same rights as the entity carrying the insurance.

An Insurance Primer

The Certificate of Insurance (COI)

A COI stipulates the most pertinent details of an insurance policy, including types and limits of coverage, provider, policy number, named insured(s), and its effective periods.

The COI *does not* amend coverage details; it is a summary of the insurance policies, limits, etc. For a more in-depth account of COIs, read the guide: "[Everything You Need to Know About Certificates of Insurance](#)."

To explain the differences between policyholders, certificate holders, and additional insureds, let's use an example of a construction project.

Policyholders

The **policyholder** is the person or entity who purchased a policy from an insurance provider. This party is usually one of the [named insureds](#) on the policy. On request, a subcontractor or vendor in a construction project will provide their client with a certificate of insurance to prove they are policyholders, and therefore have coverage in the event of bodily injury, property damage, advertising, or personal injury. Policy coverage may also extend beyond the completion of a project.

Certificate Holders

In this scenario, the client gains the title of **certificate holder**, but becoming such does not incur any policy-given rights. Again, the certificate is simply a snapshot of their insurance.

In our construction project example, the subcontractor holding a certificate is not insured against claims for damage, personal injury, or so on. Only the *policyholder* is.

Additional Insureds

Adding parties to an insurance policy as [additional insureds](#) can cause confusion. There is tension between insurers, who aim to limit the scope of coverage under their issued policies, and the policyholders, who want to ensure coverage for all potential business risk factors. Policyholders also wish to extend that coverage to all parties working on a project.

An **additional insured** endorsement is a provision made to a commercial general liability policy to extend the coverage to the client (general contractor, Home Innovation, etc.), and other relevant parties (lender, joint-venture partner, etc.) if they are listed as an additional insured on the endorsement and sometimes the COI (see below about specific vs. blanket additional insured).

For example, if a personal injury is sustained at a subcontractor's job site, the subcontractor and [any client parties](#) could be sued. Without an additional insured endorsement, the general contractor, development firm, and property owner could all be held liable for damages.

Specific vs. Blanket Additional Insured

There are two types of provisions within additional insureds: specific and blanket endorsements.

Specific additional insured endorsements are limited within the policy to *named entities*, meaning only parties specifically identified in the endorsement are covered.

With [blanket](#) additional insured endorsements, the insurance provider does *not* have a list of named additional insureds. Instead, policyholders provide the insurer with groups or classes of people who should be protected by the policy.

Blanket additional insureds can create gray areas and coverage lapses if not managed appropriately. For example, a blanket additional insured endorsement referencing "where required by written contract" is being used, then Home Innovation needs a signed Client Agreement with that party.

Insurance providers don't provide cancellation notice to affected parties with blanket additional insured endorsements—making additional insureds on the policy more susceptible to lapses in coverage, and failed loss transfer.

Home Innovation is NOT a Contractor to the Client

For the purposes of NGBS Green Certification, Home Innovation is serving as a certification agency that confirms a project's conformance with the **ICC 700 National Green Building Standard (NGBS)**.

The main difference between a certification agency and a contractor is that a certification agency is a third-party organization that evaluates and verifies the qualifications of a product, service, or person, while a contractor is a business or individual that is hired to perform a specific task or service.

Certification agencies typically have a set of standards that must be met for the product (or building) to be certified. Once a product has been certified, it can be used or sold with the assurance that it meets the required standards. As certification agency, Home Innovation cannot be directed by any contract to require how we do our job or to require a specific outcome. We do not guarantee certification of any building. Certification fees are expected to be paid regardless of the conformance decision. Our client agreement lays out the certification process and the expectations of Home Innovation, the client, and the Verifier so that the process is clear and transparent.

Contractors, on the other hand, are hired to perform a specific task or service. The scope of work for a contractor is typically defined in a contract, which outlines the responsibilities of both the contractor and the client. In this case the client can direct the contractor as to how to perform the work and the client has an expectation that the work will be completed in a certain manner for a specific result.

Reconciling Differences: Local Code vs. NGBS Requirements

NGBS Green is designed to be a voluntary, above-code green building certification and is not intended to abridge safety, health, or environmental requirements contained in other applicable laws, codes, or ordinances – see NGBS 101.3 Intent. Occasionally, local code officials may determine that one of the mandatory NGBS practices is prohibited by local code. In such a circumstance, the building may attain certification, but the NGBS Green Verifier must document in the verification report which specific practice is not permitted by local code and the reason for the conflict with the NGBS practice.

In these cases, Home Innovation will not offer alternative compliance methods, either for the code or for the NGBS practice. If the project team (architect, builder, verifier) would like Home Innovation to consider an alternative compliance path for the specific practice, we will offer our opinion as to whether the proposed method would meet NGBS requirements. Any Home Innovation opinion provided should not be construed as guidance on whether the alternative compliance would be acceptable to the local code official or local building department. We encourage clients and verifiers to first check with the code official regarding alternative compliance before seeking Home Innovation's opinion. A building may attain certification if a required practice is prohibited by local code if the verification report notes and explains the conflict.

Appeals Process

The program has an Appeal Process for when clients and or Verifiers want to challenge a Home Innovation interpretation, certification decision, or require a waiver of the normal procedures. Please see the Appeals Policy in the **BRG** Appendix C – NGBS Green Program Policies.

Defining a Building

Each separate building should earn its own NGBS Green certificate. For projects with multiple buildings, each building must be verified to be NGBS compliant, have a separate draft and final verification report unless batched, and Home Innovation will issue one certificate for each building.

A project's building count should be based on the project when complete. If multiple existing buildings are renovated to become one building that meets our definition, the building should be registered, verified, and certified as one building.

Local zoning definitions or building permit decisions are mostly irrelevant. We have tried to align with the ICC building codes, but there are a few ways in which our definition departs from ICC definitions. If in doubt, contact us. Do not chance having the final verification report and photo be flagged because the number of buildings is unclear. Notes in the verification report can help clarify what is invisible in the photo or unusual circumstances.

Duplex

For NGBS Green, a duplex is one multifamily building with two units unless it is using the Chapter 12 Certified Path (see below). Typically, a duplex has one owner responsible for renting out and maintaining the property. A duplex shouldn't be confused with a "twin home" or two-family home which is two homes that share a party wall, but each dwelling unit and the land it sits on is a separate lot and individually owned. In a two-family home, the lot line runs through the common party wall and the homes are separated vertically. For NGBS Green certification, twin homes are two single-family homes.

For NGBS Green registration, verification, and certification fees, duplexes using NGBS Chapters 5-10 for compliance are a multifamily building with two units.¹ Duplexes should use Section 1002 for compliance.

A twin home would be registered and certified as two separate single-family homes. Twin homes (or two-family homes) should use Section 1001 for compliance.

[NOTE: We know that we need to modify AXIS to allow duplexes to select the Chapter 12 Certified compliance path. So far this has not been an issue, but if you have duplexes wanting to use Chapter 12 before we modify AXIS, contact us for a workaround.]

Townhomes

Townhomes or rowhomes are a row of vertically attached houses with each home individually owned, but sometimes they are developed as rentals. Townhomes will typically be registered and certified as single-family homes.

Townhomes that are rental can be registered, verified, and certified as **Build-to-Rent (BTR)**. BTR homes are assigned a lower certification fee than SF homes and are verified and certified more like multifamily.

[NOTE: Before BTR processing was added to AXIS, we allowed some rental townhomes to be treated as multifamily, including being invoiced for MF certification fees. Going forward, rental townhomes should be registered as BTR.]

¹ A triplex is the same definition as a duplex, just swap out the "two" for "three distinct dwelling areas" and "multifamily building plus three units."

Attached Building Definition

A structure that visually appears to be multiple buildings can be certified as a single building if the buildings are connected by programmable space, other than parking or circulation, and/or have a shared physical connection greater than 50%.

Walkway Connections/ Shared Basements

Being connected by a basement or a covered walkway is not dispositive that a structure is one building. For example, a project with two separate towers that is connected via a parking garage and/or basement is NOT one building. However, when two separate towers are connected by shared interior space, the structure may be considered a single building.

Firewalls/Party Walls

The presence of firewalls, particularly in new construction, can help determine the number of buildings, but there are exemptions.

Firewalls are fire-resistant structures -- usually made of concrete, concrete blocks, or reinforced concrete -- designed to restrict the spread of fire by means of compartmentalization. The key defining feature of firewalls are their structural independence. Firewalls, in effect, **create separate, independent structures within a building**. With firewalls in place, if one section of a building becomes structurally unstable during a fire, that section can break or fall away from the other sections protecting their occupants from the collapse.

Fire walls must be continuous to the foundation. For two abutting buildings located on the same lot, this means that neither of the buildings can bear on the fire wall, which often results in the construction of three walls: the fire wall plus a separate exterior wall for each building. Floor assemblies can be connected to the fire wall using breakaway clips for continuity purposes, but they cannot be supported by the fire wall.

For new construction, buildings will typically also be separate and distinct from other attached buildings by a fire wall which breaks the thermal envelope and is designed to allow collapse of the structure on either side without collapse of the wall under fire conditions. The firewall may not visibly penetrate the roof; however, the firewall should be visible in the attic and extend up to the roof structure. One could not walk/crawl between the buildings.

If the wall is a party wall², the structure is definitively two buildings, as the ownership of the building is likely different.

The common podium wrap building, or “wrapper building,” or “Texas Donut”, is an exception. When a concrete parking structure is surrounded by a residential building, this type of project utilizes a provision added to the 2015 IBC 705.3, which allows protected openings between the buildings if the opening in the parking garage building has a 1.5-hour fire resistance rating. The opening in the residential building does not require an opening protective in this case. Because these “buildings” have an internal corridor that connects them together, and typically has shared programmable common areas on the first floor, we consider them one building despite the

² A party wall is a wall shared by two adjoining properties. A party wall is described in the IBC as “Any wall located on a lot line between adjacent buildings, which is used or adapted for joint service between the two buildings...” (IBC 706.1.1). This description indicates that party walls are specific to abutting buildings located on separate lots; a wall between buildings on the same lot would not be considered a party wall. Party walls must meet all the requirements for fire walls, except that no openings are permitted. Generally, party walls require both owners to agree on how the wall will be used and any future design changes will be handled.

presence of multiple firewalls. Other large buildings that have fire separations but share programmable space and have internal connections are also considered one building.

Multiple Entrances / Multiple Addresses

Multiple main entrances may indicate multiple buildings, but it is not dispositive. For example, a structure may be multiple attached buildings, with each building having one external entrance for a subset of apartments. These buildings may not have any notable common space(s), but instead residents would access the apartments via an internal or external hall and/or stairway. Many larger multifamily buildings also have multiple entrances/exits for egress safety, so this is not dispositive of one structure being multiple buildings.

Different street addresses (i.e., 123 Main Street, 124 Main Street, 125 Main Street) can be an indication of different buildings, but not always.

Existing buildings can be particularly tricky. Garden style projects, typically buildings are two to four stories, which have multiple firewalls and entrances can be certified as one building if the shared physical connection between the buildings is **greater than 50%**.

HOW TO COUNT STORIES ABOVE GRADE

Basement levels, located **entirely** below the ground level, are excluded when calculating the number of stories. When a building lot is sloped, and the building has more above-ground floors on one side than another, how to calculate the number of stories is shown below. For multifamily buildings, it doesn't matter what floor the apartments are on. Above-ground parking counts as a story, below-ground parking does not.

IBC Chapter 2 and the IRC defines "Story Above Grade Plane" as:

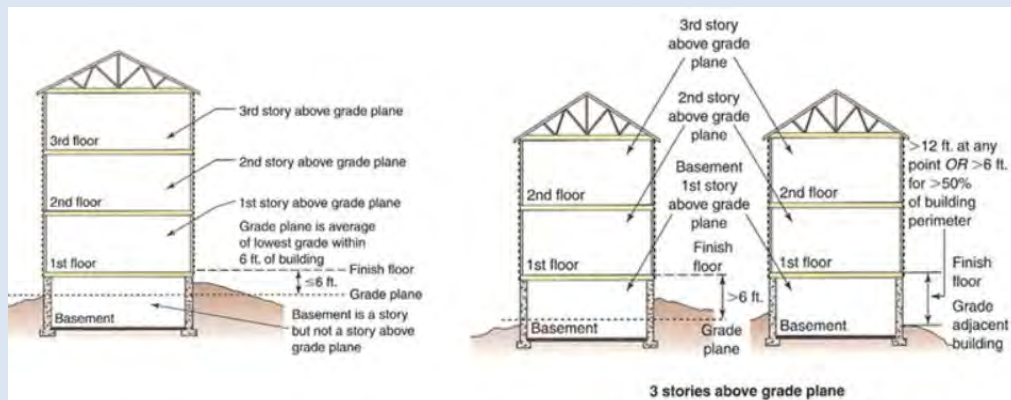
Any story having its finished floor surface entirely above grade plane, or in which the finished surface of the floor next above is:

- More than 6 feet (1829 mm) above grade plane; or
- More than 12 feet (3658 mm) above the finished ground level at any point.

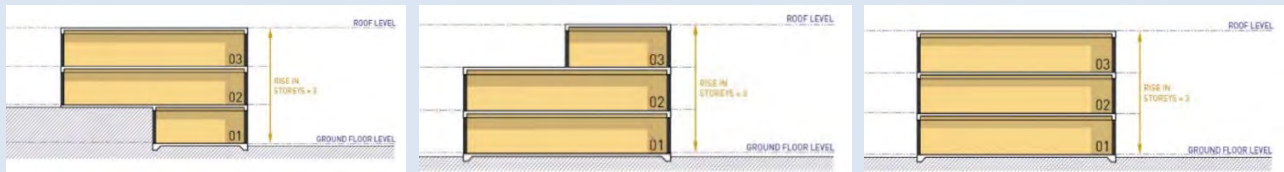
This definition has caused some confusion, so here is a step-by-step breakdown:

- Is the floor surface of the story in question located entirely above the grade plane elevation?
- Is the floor surface of the floor above the story in question located more than 6 feet above the grade plane elevation?
- Is the floor surface of the floor above the story in question located more than 12 feet above any of the grade measurements at any point along the building exterior walls?

If you answered **yes** to any of the questions above, the floor is considered a story above grade plane. See the graphic below.



For multifamily buildings on a slope, the number of stories is the sum of the greatest number of stories at any part of the external walls of the building, and any stories within the roof space above the finished ground (not counting unusable attic space).



Please take care to register buildings with the correct number of stories. It impacts what code a building must follow and determines certification fees. No one likes having to re-invoice a client when the registration is incorrect.

If you submit a photo that shows a building where a reasonable person would conclude the building is X stories, but the verification report states the building is Y stories (where Y and X are not the same number), please add a note in the report to explain the discrepancy. Otherwise, the building will get flagged and the review process will not proceed until we can confirm the correct number of stories.

Modular Buildings

Panelized modular building systems are well-suited to NGBS Green certification.

NGBS Green Verifiers are Independent, Third-Party Inspectors

Verifiers must render judgments and services "independent," "objective," and "impartial." Home Innovation has a strict prohibition against conflict of interest as it would impair objective judgment. We also strictly prohibit *the appearance* of a conflict of interest. Understanding our verifiers work with various programs, we want to be sure you comply with our requirements, which, like our certification program, are more stringent than other programs.

An NGBS Green Verifier is ineligible to provide verification services for a specific project if s/he:

- Engages in the physical construction and/or has a financial interest in the project being verified/certified;
- Supplies materials and/or installed products or systems in the project being verified/certified;
- Is employed as a sales agent for the project being verified/certified; or
- Is an immediate family member of anyone materially, financially, or otherwise substantively tied to the project being verified/certified.

Verifiers may make some minor construction fixes, such as minimal air sealing or insulation installation corrections, while providing verification services.

This list is not exhaustive; it represents what Home Innovation believes to be the most likely potential conflicts of interest that may arise. If a builder or Verifier has any doubt as to whether a relationship with or connection to a key member of the client team will violate the spirit of these rules, or cause the appearance of a conflict, s/he should contact Home Innovation. Verifiers found in violation of any of these stated conflicts of interest, or the spirit of these rules, may jeopardize the project's ability to earn NGBS Green Certified and may also lose his/her accreditation.

Due to the level of quality control and manufacturing precisions available with off-site and often computerized construction, modular and panelized homes and multifamily buildings may have an advantage in achieving above-code green building certification. However, visual verification of NGBS compliance is more difficult because the Verifier is not on-site 24/7 during factory production.

Modular Plant Process and Modular Producers Verification Plan

For each panel or modular factory, the Verifier will submit a one-page plan for approval before verification activities commence for how Verifier will verify NGBS compliance. (Projects can be registered before this plan is accepted, but no inspections should be scheduled prior.)

Available NGBS Compliance Paths

For energy efficiency, any compliance path is available under the modular pilot.

2020 NGBS Chapter 12 Certified Path is ineligible for this pilot because sampling is expressly prohibited.

Sampling for Rough in Factory

Because of the typical production schedule, sampling is expected for panel/modular-constructed buildings. The Verifier will develop a sampling plan and submit it to Home Innovation for approval.

Testing

Testing can also be sampled using the site built NGBS Green sampling policy. Testing must be completed by a qualified third-party and cannot be factory staff.

Rough Verification Report

The Verifier will submit the rough verification report when factory work is complete, and the on-site NGBS Chapter 5 practices have been verified.

Final Verification Report

Verifier will submit the final verification report when construction activities are complete and all NGBS practices can be verified.

Get the Maximum Value Out of NGBS Green Certification

The strategy to get the most value for your certification is simple – make sure everyone knows the home will be NGBS Green Certified.

NGBS Green Marketing Resources

Home Innovation has a series of free, off-the-shelf marketing materials you can use to market your project(s) as NGBS Green Certified or seeking NGBS Green certification (i.e. NGBS Green Registered).

Marketing materials are available at [HomeInnovation.com/MarketGreenCertified](https://homeinnovation.com/MarketGreenCertified). Materials are available to download directly from the website, however, certification marks are available to clients on Builder Central which is on AXIS: (<https://homeinnovation.pivotalenergy.net/app/ngbs/builder/central>)

NGBS Green + Badges

NGBS Green + is designed to offer special recognition for NGBS Green homes that "go above and beyond" in certain areas of green practices. With NGBS Green +, a builder does not need to seek additional/outside certifications to highlight special features of their home. NGBS Green + badges offer a streamlined path for supplementary recognition for NGBS Green homes based on the specific features within the home/building.

Available NGBS Green + Badges

- Net Zero Energy
- Resilience
- Smart Home
- Universal Design
- Wellness
- Zero Water

Eligibility

NGBS Green + badges must be pursued concurrently with NGBS Green Certification. Except for the NGBS Green + ZERO WATER badge, badges are available for both new construction and remodeling projects. Badges are not available for homes pursuing NGBS Green Certification via the Single-Family Certified path (Chapter 12).

Compliance Criteria

Compliance criteria for all NGBS Green + badges is outlined within the separate NGBS Green + Badge Compliance Handbook.

Verification & Documentation

The NGBS practices that are included as part of the NGBS Green + badge criteria must be verified by an accredited NGBS Green Verifier and according to the VRG.

The 2020 NGBS Green Scoring Tools include new sections that address design and verification of the NGBS Green + badges by pulling selected practices and inputs from the main Design and Verification tabs. Download the scoring tools at www.HomeInnovation.com/GreenScoring.

For the NGBS Green + badges to be awarded, the submitted final verification report should reflect the awarded practices that support NGBS Green + achievement. The NGBS Green + signature page should be signed and submitted as part of the verification packet.

Process & Fees

Interest in NGBS Green + badges can be indicated at registration or rough inspection notification.

Additional fees are assessed per badge for the additional review associated with the NGBS Green + badges. These fees are invoiced at the same time as certification fees.

Fees are assessed at the building (not unit) level, and are [available on our website](#).

Upon request, specialized project/development-wide pricing will be considered. All homes or buildings within a project/development would need to seek NGBS Green + recognition. [Contact us](#) to request volume pricing.

Benefits

Builders and developers earning NGBS Green + badges unlock specialized marketing resources that can be used to distinguish their homes or buildings from other code-built and green certified homes.

- *Logos* – Builders that have earned an NGBS Green + badge receive a customized logo that they can use in marketing of that home’s unique features or performance.
- *Certificates* – When a home achieves a NGBS Green + badge, a customized NGBS Green certificate is generated that features the badge achievement.
- *Plaques* – In the future, Home Innovation may offer new building plaques designs that reflect badge achievement.

WaterSense Certification

Homes and multifamily buildings can earn [WaterSense certification](#), EPA’s mark of superior water efficiency.

Home Innovation serves as a Home Certifying Organization (HCO) and certifies buildings in compliance with its WaterSense Approved Certification Method (WACM), a methodology developed by Home Innovation to demonstrate that a home meets the WaterSense efficiency requirement.

Eligibility

WaterSense certification is available for buildings seeking 2020 NGBS Green certification.

Compliance Criteria

Compliance criteria are based on selected 2020 NGBS practices, and there are two pathways available.

1. [Prescriptive Path](#): implement selected practices from Chapter 8 or 11, including installing efficient kitchen faucet, appliances, and hot water and irrigation systems

2. [Performance Path](#): demonstrate overall water performance by earning a [Water Rating Index \(WRI\)](#) value of 64 or less

Verification & Documentation

WaterSense compliance must be verified by an [NGBS Green WRI Verifier](#).

The NGBS Green Scoring Tools include new sections that address design and verification of WaterSense by pulling selected practices and inputs from the main Design and Verification tabs. Download the scoring tools at www.HomeInnovation.com/GreenScoring.

For WaterSense certification to be issued, the submitted final verification report should reflect full compliance with WaterSense.

Process & Fees

Interest in WaterSense can be indicated at registration or rough inspection notification.

Home Innovation issues WaterSense certification at no additional charge; the NGBS Green Verifier may request additional fees for verification for both NGBS Green and WaterSense compliance.

Benefits

By seeking WaterSense certification, builders can draw attention to their homes' water efficiency features by leveraging one of the most recognizable consumers labels for water efficiency. Builders and developers earning WaterSense certification can access a specialized home certificate, logos, and other marketing resources.

FTC Green Guidelines Information

Builders marketing their homes as green need to be careful not to run afoul of the Federal Trade Commission (FTC). The FTC protects consumers by stopping unfair, deceptive, or fraudulent practices in the marketplace, and over the past few years has looked askance at the proliferation of green marketing claims, or "greenwashing," by product manufacturers.

The FTC's Green Guides ([Federal Trade Commission, 16 CFR Part 260 Guides for the Use of Environmental Marketing Claims; Final Rule](#)) provide guidance to help marketers avoid making misleading environmental claims. The 2012 Green Guides include new guidance on use of product certifications and seals of approval.

The Green Guides state that certifications constitute endorsements covered by the FTC's Endorsement Guides and that that certifications must be FTC compliant. Further, the FTC states that it is "deceptive to misrepresent, directly or by implication, that a product, package or service has been endorsed or certified by an independent third-party." The FTC makes explicit distinctions between first-, second-, and third-party certifications. First-party certifications are self-certifications, for example, when a builder asserts that their homes are "green." Builders must disclose self-certifications. Second-party certifications are those conferred by a trade association or membership organization. If a certification is issued by a membership organization, such as a builder's association, the builder must disclose the connection with the association (i.e., that he is a dues-paying member). If the marketer does not, the FTC ruled that is deceptive. Independent, third-party certifications are the only type where disclosure is unnecessary.

Home Innovation, an independent, third-party according to the FTC definition, and its NGBS Green certification provides a marketing safe harbor for builders, developers, and remodelers who want to convey the green, sustainable features of the homes they construct or remodel without being deceptive to consumers regarding the green certification.

The NGBS Green certification mark was designed specifically to help builders comply with the FTC Green Guides. The mark incorporates the "Home Innovation" name as the certification agent and "NGBS" to specify the ANSI-approved standard to which the home was certified. Further, we recommend that our clients prominently accompany the certification mark with the following statement: "NGBS Green Certified homes/residences/communities [*user selects what is relevant*] comply with the ICC 700 National Green Building Standard® and are designed to be more comfortable, use less water and energy, and reduce environmental impacts, during construction and occupancy." Builders can customize the precise language, but we recommend they be specific in their claims in order to be FTC-compliant.

We recommend that builders reference our website and can use the following sentence: "For details on which attributes were evaluated, visit www.NGBS.com."

Incentives & Mandates

There are many incentives available at the federal, state, and local level to encourage high performance sustainable buildings and retrofits. Incentives come in myriad forms and include, but are not limited to, tax credits, rebates, density bonuses, and expedited permitting. Other jurisdictions mandate green building requirements.

Home Innovation has a list of the incentives and mandates that recognize the NGBS – HomeInnovation.com/NGBSIncentives. The list is updated regularly but may not include incentive available. Contact us if our list is missing any incentives or mandates, or if we can help you advocate for an incentive in your jurisdiction.

Information on the Inflation Reduction Act of 2022 is [available here](#).

Multifamily buildings seeking NGBS Green certification are eligible for preferred financing from Fannie Mae, Freddie Mac, and HUD FHA. Click [here](#) for more information.

Get a Qualified Appraiser

Many appraisers are unfamiliar with above-code green practices, products, and technologies and, therefore, do not know how to appropriately value them within the context of that market. Further, even if the appraiser appreciates the additional value of above-code green practices, products, and technologies, he or she may not be able to confirm many of those practices, products, and technologies because they are hidden behind the drywall by the time the appraiser is called to value the home.

There are two solutions to ensure you earn the proper green valuation.

1. Ensure the appraiser has experience and/or training in valuing high-performance green buildings.

Work with your lender partners to ensure that appraisers are qualified to value green, high performing buildings. Alternatively, builders can add a clause to their sales contracts to require an experienced appraiser. One client provided the following example:

This Home is being built/renovated/updated to nationally recognized standards above prevailing code. It is designed and constructed with unique features and materials and with highly efficient equipment and in accordance with high efficiency standards. The Lender shall choose an Appraiser educated and knowledgeable in this type of valuation of these specialized Homes, preferably an appraiser who holds a professional appraisal designation that requires advanced education on such issues as the valuation of sustainable buildings (e.g. MAI or SRA designations from the Appraisal Institute). The appraiser shall provide verification of green valuation education of 14 hours or more from a qualified educational provider and knowledge to be permitted to conduct the appraisal for this project.

2. Help your experienced appraiser appropriately value the building by completing the Green Addendum.

Green, high-performance buildings, however, are atypical properties because of their green features. The Appraisal Institute developed the [Green and Energy Efficient Addendum](#) for residential buildings and commercial (multifamily) buildings to signal that a building is not typical and help appraisers appropriately value green, high-performance homes. The Addendum inventories the green practices, products, and technologies in the building and even recognizes NGBS Green certification specifically for the valuation process.

One benefit of using the Addendum and a trained appraiser is that it will allow the appraiser to go further afield for comparable homes. An NGBS Green Certified building is not "comparable" to the code-minimum home down the street, why should that home be used as a comparable in the valuation process? Instead, the Green Appraisal Addendum can help identify the home as unique and look for homes that are more similar. Builders can go even one step further and maintain a list of any nearby comparable green homes and looking for any NGBS Green Certified homes in your region is on [NGBS.com](#).

APPENDIX A: Home Innovation Staff

The NGBS Green Team is here to assist you. If you require assistance, use the [Contact Us](#) form so that we can be sure you get a timely response.

Michelle Foster, Green Team Lead, mfoster@homeinnovation.com, 240.997.8027

Kevin Kaufman, Green Quality Manager
Certification oversight, QA/QC

Lynda Mosteller, Green Certifications Administrator, lmarchman@homeinnovation.com
Verifier accreditation, certification administration (which includes client agreements, certificate issuance), database management

Joanne McAlpin, NGBS Green Programs Associate, jmcaldpin@homeinnovation.com
NGBS Green PRO accreditation, certification administration, database management, AIA and ICC continuing education coordinator

Cindy Wasser, Senior Green Programs Manager, cwasser@homeinnovation.com, 202.590.2577
Customer Care, Green Certified Products oversight, WRI / WaterSense Certification oversight, verification oversight, program advocacy, technical assistance, program liaison

Katie Dorn, Green Buildings Programs Associate, kdorn@homeinnovation.com
Verification oversight, program advocacy, technical assistance, program liaison, ESG expert

Pam Barksdale, Senior Reviewer and Special Projects Coordinator
Verification Report Reviewer, training narrator

Pranav Phatak, [Sustainable Building Scientist](#), Verification Report Reviewer

Dave Mallay, Research Engineer, energy efficiency expert

Elina Thapa, Research Engineer, Verification Report Reviewer, training narrator

Damiyen Wilkerson, Research Engineer, Verification Report Reviewer

Sultan Alanazi, Research Engineer, Verification Report Reviewer

Mario Gozum, Verification Report Reviewer, Green Billing Support

Michael Gardiner, Verification Report Reviewer

Chase Bowman, Verification Report Reviewer

Sarah Armand, Director of Communications
Marketing materials, logos, news releases, media coordination, NGBS.com coordination/management, events calendar manager

Kelly Jerald, Green Billing Administration and Support
Payment notices, billing issues

Bill Watkins, Green IT Manager
Database administration, scoring spreadsheet assistance, Verifier administration support (registration, inspection notification), automation, program software engineering

NGBS Green Appeals Board:
Michael Luzier (President & CEO), Bill Ingley (CFO), and Kevin Kaufman (Green Quality Manager Certification oversight, QA/QC)

Bob Burns, Pivotal Energy Solutions, President, and Chief Executive Officer
AXIS NGBS Green Portal

APPENDIX B: NGBS Green Certification Resources

The [NGBS Green website](#) has lots of [Resources](#) for those who design, build, remodel, develop, verify, and advocate for NGBS Green certification of single-family homes, multifamily buildings, and land developments.

There are also resources for consumers interested in living in an NGBS Green Certified home.

[Contact us](#) if you have any questions about [NGBS Green Certification](#).

Resource categories:

- Design & Build a Green Home
- NGBS Green Interpretations & Compliance Assistance
- Get Your Green Home NGBS Certified
- Market & Sell NGBS Green
- Live NGBS Green
- NGBS Green Program Info
- Stand Up for NGBS as a Choice in Your Market

APPENDIX C:
NGBS Green Certification Program Policies



NGBS Green Certification Program Policies

1. NGBS GREEN CERTIFICATION POLICIES

1.1 Applicable Buildings

(Effective April 2013; Revised November 2021; June 2023)

The NGBS specifically addresses single-family homes, multifamily buildings, the residential portions of mixed-used buildings, mixed-use buildings where the non-residential portion of the building is less than 50% of the gross floor area, land developments, and remodeling projects, but the definitions of dwelling unit and sleeping unit allows for broader use beyond these types of residential construction. There are no restrictions based on end-use, height, or construction type.

The 2015 NGBS covers buildings with units that meet the definition of a dwelling unit—i.e., “a single unit providing complete, independent living facilities for one or more persons, including permanent provisions for living sleeping, cooking, and sanitation.” The 2020 NGBS covers buildings with units that meet the definition of a dwelling unit or sleeping unit—i.e., “a room or space in which people sleep, which can also include permanent provisions for living, eating, and either sanitation or kitchen facilities, but not both.”

Home Innovation has established the following rules regarding applicable buildings. NGBS Green Verifiers should be aware of these requirements and communicate requirements to all builder/developer clients.

Building Definition

Every building must earn its own NGBS Green certificate. For projects with multiple buildings, each building must be verified to be NGBS compliant, and Home Innovation will issue one certificate per building.

A project’s building count should be based on the project when complete. If multiple existing buildings are renovated to become one building that meets our definition, the building should be registered, verified, and certified as one building. Local zoning definitions or building permit decisions are largely immaterial. If in doubt, contact us. Verification report notes can help clarify what is invisible in the photo or unusual circumstances.

A duplex is one multifamily building with two units, unless it is using the Chapter 12 Certified Path. Typically, a duplex has one owner responsible for renting out and maintaining the property. Duplexes should use Section 1002 for compliance.

A “twin home” (two-family home) is two homes separated vertically that share a party wall with each dwelling unit on is a separate lot and individually owned. Twin homes are two single-family homes. A twin home will be certified as two separate single-family homes and use Section 1001 for compliance.

Townhomes or rowhomes are a row of 3 or more vertically attached houses with each home individually owned (rentals see below). Townhomes constructed for homeownership are certified as single-family homes. Townhomes intended for renters can be certified as **Build-to-Rent (BTR)**. BTR homes have special certification fees and are certified as multifamily.

Attached Multifamily Buildings

If the wall between buildings is a party wall, the structure is definitively two buildings. Firewalls, particularly in new construction, can help determine the number of buildings, but there are exemptions. For new construction, buildings are separate and distinct from another attached building by a fire wall which breaks the thermal envelope.

Exemptions: A structure that visually appears to be multiple buildings can be certified as a single building if the buildings are connected by programmable space, other than parking or circulation, and/or have a shared physical connection greater than 50%. A podium wrap building, with shared internal corridors, is one building, despite having multiple firewalls. Other large buildings that have fire separations but share programmable space and have internal connections are also one building.

If the only connection is a basement or a covered walkway that is not dispositive then the structure is one building.

Multifamily & Mixed-Use Buildings

There is no height limit for buildings seeking NGBS Green certification. All units within the building and the residential common areas must comply with the NGBS, as certification is issued for the entire building, not individual units.

Existing buildings can also attain one of the four levels of certification when units and the residential common areas are remodeled according to the NGBS requirements.

The residential portions of mixed-use buildings can earn NGBS Green certification.

Townhouses

Home Innovation defines multifamily buildings as those where several units share common areas, as well as common foundation and roof. Townhouses, duplexes, triplexes, rowhouses, and quads must be scored and certified as single-family homes, unless they are permitted locally as multifamily. Home Innovation requires that all buildings consisting of eight units or less submit a copy of the local building permit.

When townhouses are certified as multifamily, one certificate is provided and it contains a group of addresses (e.g., 100, 102, 104, 106 Main Street).

Townhouses permitted as multifamily can be certified as single-family if desired and each unit will get a certificate.

Hotels, Assisted Living Facilities, Residential Board and Care Facilities, and Group Homes

The 2020 NGBS has a revised scope and definitions that allow hotels and other buildings to seek NGBS Green certification. The 2020 NGBS Section 101.2.1 defines what occupancies are considered residential for purposes of the NGBS. A definition of “sleeping unit” is added to the “dwelling unit” definition-

Buildings that can meet both Section 101.2.1 and either the definition of sleeping unit or dwelling units can seek NGBS certification.

Buildings in any of the above categories are certified following the verification and certification rules for multifamily buildings.

Multifamily certification fees apply.

In some unique circumstances, such as a smaller group home or shelter where the units do not have a separate kitchen area but has shared kitchen facilities accessible for the occupants of the units without an additional fee, the building should be verified as if it were a single-family home. When in doubt, [contact us](#).

Existing Buildings Less than Five Years

The 2020 NGBS has an eligibility gap for existing high performing buildings occupied less than five years. NGBS Section 305.2.1 states that “Projects that would be eligible [for certification] must have their Certificate of Occupancy at least 5 years prior to NGBS registration.”

As a result, a three-year old building constructed to be 2020 NGBS compliant would have to wait two-years until it was more than 5 years old to seek an NGBS Green certificate of conformance. Home Innovation believes this restriction to belie the overall intent of the NGBS *to serve as a national benchmark for green residential construction*.¹

Home Innovation will allow existing buildings from one-to-five years old to seek NGBS Green certification using the Chapter 11 compliance path. Eligible buildings must have a Certificate of Occupancy for more than one-year, but less than five-years, at the time of NGBS Green registration. This is consistent with the proposed change that was accepted so far by the 2024 NGBS Consensus Committee. Buildings following Chapter 11 proceed with the normal certification process.

Existing building(s) less than 5 years old that wish to follow the new construction certification path (Chapters 5 through 10) to earn certification must follow the NGBS Green [Administrative Appeals Process](#).

1.2 Team Verification

NGBS Green Verifiers may verify projects as a team. Home Innovation allows multiple accredited verifiers to perform rough and final inspections and documentation collection for a single building. Only fully-accredited verifiers are permitted to perform verification inspections for any project seeking NGBS Green Certification. Home Innovation recognizes one “Verifier of Record” per building, the verifier who signs the final verification report, and Home Innovation holds the Verifier of Record responsible for the accuracy of the compliance report.

NGBS Green Verifiers or the verifier’s company may choose to establish a sub-contract agreement with accredited NGBS Green Verifier(s) to provide verification services.

¹ 2020 National Green Building Standard ICC-700, page ii

1.3 Field Inspections Dates (Revised November 2014)

The date on the verification report (either rough or final) should be the date of the site visit, not the date when the report is submitted, even if the final report submission is delayed by documentation collection or payment. For multifamily buildings, the date should be the date of the last inspection for that stage (rough or final). Verifiers are expected to keep their own records regarding inspection dates when multiple visits are required for large multifamily projects. If there is a delay in submitting the final report due to waiting for documentation, a note explaining the time difference between the rough and final inspection dates should be included on the final signature page. Submission of the rough report should not be delayed because of pending documentation. The Verifier should not award points, but instead include a note that points will be awarded at final pending review and acceptance of the documentation.

1.4 Document Retention

(Effective October 2009)

Verifiers must maintain inspection documents for a minimum of three years after final inspection. Verifiers are required to keep a copy of the scoring spreadsheet with final verification, digital photos, a copy of the energy and/or water analysis, and any information related to uncertain items noted.

Documents can be kept electronically but must be appropriately backed-up and easily retrievable should Home Innovation need to obtain copies during the three-year post-certification period.

1.5 “Verified by City Inspector” Not Acceptable

(Effective September 2010)

The NGBS Green Verifier who signs a verification report is responsible for ensuring that the building meets the awarded NGBS practices. Verifiers must not assume that any NGBS practice is met simply because the local building code aligns with the NGBS practice(s).

For example, points are awarded for insulation installation according to the “grade” given during inspection. Building inspectors do not grade insulation according to the NGBS requirements. A Verifier cannot claim that a city inspector performed the third-party insulation grading unless the inspector provides a written statement that includes the grade. Also, the typical jurisdictional plan review by the local Building Department does not qualify to meet the intent of 701.3. Points should be awarded based on first-hand visual inspection when the VRG instructs that the practice be verified by inspection.

1.6 Missing a Mandatory Practice at Rough Inspection

(Effective September 2010)

If a Verifier misses an NGBS practice during the rough inspection, it is typically acceptable for him/her to approve the practice at final inspection, provided s/he can properly inspect the practice during the final inspection.

Missing a mandatory practice that can only be verified at rough will cause the building to be ineligible for certification unless the builder is willing to remove drywall and/or siding for inspection. Photos by the builder and other evidence are not acceptable for after-the-fact verification, unless expressly stated in the **Verifier’s Resource Guide** (VRG).

1.7 Transition to Updated Versions of the NGBS (Effective July 2013)

The NGBS is typically updated on a three-year cycle to parallel the building code cycle. ANSI requires that the NGBS be updated at least every five years. When a new version of the NGBS is approved by ANSI, Home Innovation will announce the transition period for projects seeking certification. Typically, builders and developers who wish to transition quickly to the new NGBS version may do so shortly after ANSI approval and as soon as Home Innovation releases the updated NGBS Green Scoring Tools and verification resources.

Whenever the NGBS is updated, Home Innovation will schedule webinars to help architects, builders, developers, and verifiers make the transition and understand the new practices and requirements. NGBS Green Verifiers will be required to earn accreditation to the new NGBS version prior to conducting inspections to the new version.

Deadlines for NGBS transitions are published in the Verifier and Insider Updates and on the Home Innovation website in the “News and Events” section. NGBS Green Verifiers and clients should read program updates from Home Innovation to be kept informed of important transition deadlines.

1.8 Complaints & Appeals (Revised October 2016, May 2018, February 2023)

Home Innovation provides the opportunity for NGBS Green Partners and verifiers to submit complaints or appeals via the [“contact us”](#) link on our corporate website. Home Innovation will also receive written complaints and appeals via email, US mail, or another document delivery. If staff receives a phone call or verbal complaint, the complainant is asked to submit it in writing.

Formal complaints and appeals will be recorded and responded to promptly. When a complaint or appeal is submitted, the Vice-President for Sustainability should inform the following Home Innovation staff: NGBS Green Quality Director, the CFO, and the President/CEO. The Vice-President for Sustainability is responsible for investigating the cause of the complaint, initiating any needed corrective action, and responding to the client. Home Innovation staff that receive a complaint are expected to document it appropriately and notify their division director; and when the complaint is regarding the NGBS Green certification program, the Vice-President for Sustainability must also be notified.

In general, the difference between a complaint and an appeal is the scope of the issue. Complaints are typically specific to an individual project or an individual Verifier or builder. Appeals may be specific to a project, or they can be a request for a new interpretation, policy, or procedure that would apply more broadly to the NGBS Green certification program. Complaints are typically kept confidential. Appeals are typically shared with program participants because they have a potentially broader application.

PROCESS

The following process is used to address complaints or appeals.

- 1) Upon receipt of an appeal or a complaint, the NGBS Green Certification Manager will submit the necessary information to the NGBS Green Certification Administrator to be recorded into the formal log.
- 2) For an appeal or complaint, the following information must be collected:

- i. COMPANY
 - ii. CONTACT INFORMATION
 - iii. PROJECT ADDRESS (if relevant)
 - iv. As relevant, PROJECT ID
 - v. REASON FOR APPEAL/COMPLAINT
 - vi. VERIFIER NAME (If relevant/available)
 - vii. NEW POLICY, INTERPRETATION, OR PROCESS (If relevant), **OR**
 - viii. ACTION REQUESTED (i.e., waiver of a program requirement, probation for a Verifier, or reinspection of a project)
- 3) The Vice-President for Sustainability will send an email of receipt to the appellant/complainant and will review each appeal and complaint to assess its validity relative to the work and responsibility of Home Innovation.
 - 4) All documents should be forwarded via email to the President, CFO, and NGBS Green Quality Director regardless of their validity within one business day. The VP of Sustainability will also include an initial recommendation if the appeal or complaint is valid as described below.
 - 5) For complaints, the Quality Director shall provide notice to the person or organization that is the subject of the complaint that a formal complaint has been filed.
 - 6) The voting members of the Home Innovation NGBS Green Appeals Board are the President, the CFO, and the NGBS Green Quality Director. The VP, Sustainability may take part in the deliberations, but cannot vote on an appeal.
 - 7) An appeal or complaint is considered “valid” so long as it is within the scope of the NGBS Green certification program and/or that Home Innovation has responsibility over the subject issue.
 - 8) Invalid submissions will be followed up by VP, Sustainability with a written reply to the submitter with an explanation of why their concern is not within the scope or responsibility of Home Innovation. The individual or the organization that is the subject of the complaint will also be provided notice of such a decision.
 - 9) Valid submissions will receive an acknowledgement that it has been received and is being investigated. For an appeal to proceed, the appellant must pay an Appeal Fee to Home Innovation. The NGBS Green fee schedule is located [here](#). Once the Appeal Fee is paid, the CFO’s Office will notify the VP, Sustainability and NGBS Green Certification Administrator and the Appeal can be investigated.
 - 10) For complaints, the Quality Director will forward formal notice and relevant documents to the individual or organization that is the subject of the complaint and they will be permitted 30 days to respond in writing to Home Innovation via the VP, Sustainability to refute or confirm the allegations.
 - 11) The VP, Sustainability will investigate the cause, the impact, and appropriate corrective actions. As part of the investigation, the VP, Sustainability will schedule a meeting of the NGBS

Green Appeals Board to hear from the appellant their reasons for the appeal. The results of the investigation will be reviewed with the President, CFO, and NGBS Green Quality Director and they will initiate appropriate corrective actions to resolve the issue.

- 12) The submitter and the individual or the organization that is the subject of the complaint if relevant, will receive progress reports every 30 days until the situation has been resolved or the final appeal has been completed. When the Appeal is finally resolved, the VP, Sustainability will send an explanation of the decision and instructions if a project can proceed with certification.
- 13) Decisions regarding an appeal will be filed with the NGBS Green Certification Administrator so the decision can be recorded in the Appeals log. Decisions regarding a complaint will be recorded in the Complaints log and in the appropriate Project/Verifier/Builder file, as relevant.
- 14) Submissions related to appeal or disputes related to certification activities shall be communicated to the Certification Impartiality & Oversight Committee for their review.
- 15) If an appeal is successful regarding an interpretation; program policy; or certification requirement, the decision and any resulting new policies shall be communicated to the relevant NGBS Green program participants and included in revisions to the **Builders Resource Guide** and/or **Verifier Resource Guide**.

ADMINISTRATIVE APPEALS PROCESS FOR MISSING ROUGH INSPECTIONS

Home Innovation will allow buildings to seek NGBS Green certification via a waiver of the mandatory visual inspection(s) when all or part of the building misses the pre-drywall inspection(s) and the Verifier, using the verification methods described below, can determine the building is NGBS compliant with 100% certainty.

Because the NGBS Green pre-drywall inspection is waived, documentation and proof of compliance requirements are more stringent than that required for buildings that can be fully visually inspected. Furthermore, projects following this process are subject to a higher rate of audit.

ELIGIBILITY

Buildings are eligible for up to one-year post-occupancy. For communities with multiple buildings, the last building completed must be no more than one (1) year past occupancy. Buildings must seek certification to the NGBS version(s) for which Home Innovation is currently accepting registrations.

Buildings or projects that do not meet this eligibility criteria cannot use the Administrative Appeals process but instead can submit a formal appeal to the Appeals Board (see above).

This process does not guarantee a project will earn NGBS Green certification. Only accredited Verifiers in good standing can initiate an Administrative Appeals process via AXIS. Verifiers must fully consider if, based on their review of the building plans and specs and any other available definitive documentation (photos, scopes of work, invoices, etc.) that the building is compliant in their professional judgement. Documentation to determine conformance may ultimately be deemed inconclusive or unacceptable

during review. If the building is deemed ineligible to earn certification using the administrative process, the client may submit a formal appeal of this decision for an additional fee.

Administrative Appeals Process

1. **Verifier registers the project.** Select “This Building is subject to an appeal” for each building address that is subject to an appeal. If following Chapters 5-10 or Chapter 12 for New Construction, send an email to Lynda, and we will manually modify AXIS so that the Verifier can upload the final verification report without submitting a rough verification report. If there is a Commercial Space certification, contact Lynda. There is not an additional appeal fee for the certification space, but it must be registered with the project.
2. **Pay the Appeals Fee.** Verifier should immediately generate an Appeals invoice for the administrative fee. The administrative appeal fees [are listed here](#). The appeal fee is separate, and in addition, to [certification fees which are listed here](#). If the project decides to pursue a formal Appeal, an additional, per building fee will be required. The fee should be paid right away; review of the project documentation will not commence until the fee is paid. Appeals fees are non-refundable.
3. **Client registers for AXIS account.** New clients must also register for an AXIS account and complete an NGBS Green client agreement. Existing clients should confirm their client agreement and proof of insurance are current.
4. **Pay the Certification Fee.** After registration is accepted, Verifier or client should also generate a certification fee invoice and pay the fee. Certification fees are non-refundable. There must be a complete CA in AXIS for the certification fee invoice to be generated.
5. **Upload Verification Report and Documentation.** Verifier uploads verification report (must include rough and final worksheets completed) and alternative verification documentation to AXIS.
6. **Project Review.** Project is assigned a reviewer and undergoes review. As usual, projects will not be reviewed until Home Innovation has a complete client agreement, a current COI, and the certification fee is paid. (Verifiers please note that review for projects following an appeal can take up to a week.)
7. **Certification Decision.** Verifier and client notified via AXIS if project earns certification.

VERIFICATION REQUIREMENTS

Verification requirements for projects seeking 2020 NGBS compliance using the administrative appeals process can be found in Appendix B of the VRG Part I. Verification requirements for the 2015 NGBS are available on request.

VERIFIER RESPONSIBILITY

The streamlined administrative process does not change a Verifier’s duty to confirm NGBS compliance beyond any doubt. Please note before proceeding that this alternative verification process may require drywall removal to confirm proper insulation installation. Before starting the administrative appeals process, confirm with the project team that this is acceptable. Drywall removal instructions are detailed in the verification guidance.

1.9 Responding to Homeowner Issues

(Effective November 2014)

Home Innovation does not have a direct relationship with owners/renters of NGBS Green Certified homes. If a homeowner or renter contacts Home Innovation regarding a specific project or client (builder, developer, or Verifier), Home Innovation will try to understand the specific issue(s). Our policy is to act only if the dispute is directly related to the NGBS Green certification. If the issue is outside the scope of the certification, we will encourage the owner/renter to work with the builder to resolve the issue at hand.

Home Innovation's process for responding to homeowner/renter issues is as follows:

- 1) Gain understanding of the homeowner/renter's issues:
 - a. Obtain building address and builder's name to confirm it is an in-process or certified building.
 - b. Ask the buyer/renter for details about their issues, particularly how it relates to NGBS requirements.
 - c. Ask the buyer/renter if they have discussed the problem with the builder and how the builder is addressing the issue.
 - d. If the issue relates to the NGBS Green certification, tell the buyer/ renter that we will investigate the situation and get back to them. If the issue is completely unrelated to the NGBS Green certification, we will encourage the buyer/renter to work directly with the builder to address the situation.
- 2) Document the complaint in an internal email to alert management of the issue.
- 3) Contact the builder/developer client and NGBS Green Verifier:
 - a. If the complaint is specific to an NGBS practice, review the verification report to see if the verifier awarded points for that practice (or indicated that a mandatory practice was applicable and met).
 - b. If it appears that the verifier missed something during the inspection process, Home Innovation will contact the verifier to discuss the issue.
 - c. If the issue appears to be the responsibility of the builder/developer client, Home Innovation will contact the builder and ask about the situation.
- 4) Follow-up:
 - a. If the issue is outside of the scope of the NGBS Green certification, Home Innovation will contact the homeowner/renter in writing to explain why the issue is outside the scope of certification. The individual will be encouraged to work with the builder to resolve the issue, if possible.
 - b. If the issue is related to the NGBS Green certification, an internal meeting with the Executive Management Team and the Green Team staff will be arranged to determine the appropriate response. Once a decision is made, but prior to contacting the owner/renter,

Home Innovation will inform the verifier and the builder of how we intend to resolve the issue. We will subsequently contact the owner/renter with our decision.

Home Innovation considers the verification report a document that contains the builder's proprietary information and does not share the report to any outside party without the builder's permission. Verifiers should follow the same policy. The builder can provide the information to anyone at their discretion.

Home Innovation typically does not provide the verifier name and contact information directly to the homeowner/renter except when we are unable to reach anyone at the builder company, required by a court, or permission has been expressly granted by the verifier.

1.10 Deadlines for Final Inspection Package: Single-Family Homes (Effective February 2012)

Within 30 days after a building's final inspection, the Verifier must submit the final inspection package to Home Innovation. If, at that time, the Verifier has unresolved payment or other issues with the client and wishes for Home Innovation to delay processing of the verification report/issuing of the certificate pending resolution, he/she must provide Home Innovation an email explaining the situation. Upon receipt of the Verifier's written request, Home Innovation will contact the client to inform them we have received the final verification submittal but are delaying processing it at the Verifier's request. We will also remind the client that if 90 days elapses after the date of final inspection of a building, the project seeking certification will need to be re-inspected before it can be certified.

Verifiers who do not submit the final inspection package for a home within the 30-day period after completing a final inspection will jeopardize the building's ability to be certified and will receive a failing grade for the final inspection package, per the grading rubric. Repeat offenders will be put on probation.

1.11 Energy Modeling Policy

(Adopted January 1, 2020; Revised June 2020, Effective July 1, 2020; Revised March 2021; Revised September 2021)

Summary: This document identifies the appropriate software programs and modeling approach for each of the energy efficiency compliance pathways in the NGBS.

Effective Date: All projects registered on or after July 1, 2020, must meet the requirements outlined in this policy.

Software Versions: For all "List 1" software programs listed within this document, accepted versions are identified on [this list](#). For all "List 2" software programs listed within this document, accepted versions are identified on [this list](#). Accepted versions of RESNET-approved software programs are identified on this list. The submitted energy performance report should reflect an accepted version at time of project registration.

Note on Eligible Software: Qualifying software programs are those listed within this document. Modeling outputs from other software programs are not accepted.

Ideally, software should be selected that can be used to accurately model both residential and commercial spaces. For software that cannot accurately account for common space/halls uses (i.e., REM, Ekotrope, EnergyGuage, etc.), these spaces should be either a) modeled separately to show equivalent compliance using Commercial software or b) shown to be better than the IECC using

REScheck software outputs that show compliance with the requirements of IECC R402 through R406, provided that no equipment is shared across the dwelling units and common areas. In these scenarios, Home Innovation accepts different modeling methods to be applied to the dwelling units and common areas. For example, a performance approach can be pursued for the dwelling units, and a prescriptive REScheck can be reviewed for the common areas.

REScheck reports are only acceptable documentation for common areas. A REScheck report cannot be substituted for any of the accepted software programs listed within this policy for whole-building modeling.

Notes on Energy Performance Reports: Energy performance reports should reflect as-built conditions.

“Confirmed rating” refers to an energy performance report that is complete and shared with the appropriate oversight body. Where a confirmed rating is required, the energy efficiency performance report should not show language such as “DRAFT” or “Unconfirmed.”

Professional Qualifications for Energy Modelers: The 2020 NGBS Green Scoring Tools include field(s) for the NGBS Green Verifier to identify the name and credential(s) of the professional who generated the energy model.

In general, the following energy modeling credentials are encouraged but not required. However, where a confirmed rating is required, the project team should defer to the credentialing requirements of the oversight body.

For Single-Family Homes and Multifamily Building 3 Stories and Below:

- RESNET Certified Home Energy Rater (“HERS Rater”)

For Multifamily Buildings 4 Stories and More:

- AEE Building Energy Simulation Analyst (BESA)
- BEMP – Building Energy Modeling Professional Certification
- ENERGY STAR Multifamily High Rise Licensed Professional

NGBS GREEN ENERGY MODELING GUIDELINES

Compliance Pathway	Baseline/Reference Documents	Eligible Software	Approach	Documentation	Confirmed* Rating Required? Y/N
NEW CONSTRUCTION – 2012, 2015, and 2020 NGBS					
Section 702 - Performance Path (2012, 2015, and 2020)	Single-Family & Multifamily 3 Stories and Below: ICC IECC, Section R405	Single-Family & Multifamily 3 Stories and Below: model dwelling units using software from List 1. For common areas, model using software from List 2 or verify common areas using REScheck report.	Single-Family & Multifamily up to 3 stories: whole-building; unitary; unit-by-unit approach, or a building average of a unit-by-unit approach. Sampling of multifamily energy modeling: Please refer to the “Sampling of Multifamily Energy Modeling” instructions below.	Energy performance report showing energy savings at or above baseline. NGBS Green report is utilized when available in selected software program. Energy performance matches value entered in scoring tool. Single-Family & Multifamily 3 Stories and Below: model using NGBS Reference Home values included within this Policy.	N
	Multifamily 4+ Stories: ICC IECC Section C407.2 through C407.5, as applied as defined in the ICC IECC	Multifamily 4+ Stories: whole-building modeling using software from List 2.	Multifamily 4+ Stories: whole-building energy modeling Energy modelers can group dwelling units together as “thermal blocks” for the purposes of modeling per ANSI/ASHRAE/IES Standard 90.1-2016.	Multifamily notes: If employing building average or unit-by-unit approaches, submit analysis showing the units modeled and corresponding performance. This can be submitted as an Excel table or another file format.	
Section 703 - Prescriptive Path (2012, 2015, 2020)	N/A – Energy Modeling & Documentation Not Required				
Section 704 – HERS Index Target Path (2015)	HERS Index Target Procedure for National Program Requirements for ENERGY STAR Certified Homes, Version 3	RESNET Approved Software Programs.	Unitary or unit-by-unit approach. Sampling of multifamily energy model is permitted per RESNET Sampling Guidelines.	HERS report, showing <u>confirmed*</u> features and energy performance. For multifamily, worst-case scenario for the building is submitted. At a minimum, at least one modeled unit (the worst performing unit) is submitted to RESNET for a confirmed rating and QA oversight. HERS score matches value entered in scoring tool.	Y

NGBS GREEN ENERGY MODELING GUIDELINES

Compliance Pathway	Baseline/Reference Documents	Eligible Software	Approach	Documentation	Confirmed* Rating Required? Y/N
Section 704 – HERS Index Target Path (2015) (CONTINUED)				<i>Multifamily notes:</i> submit analysis showing the units modeled and corresponding performance. This can be submitted as an Excel table or another file format.	
Section 704 - ERI Path (2020)	National ERI Target Procedures for ENERGY STAR Certified Homes Version 3.0	See List 1.	Unitary or unit-by-unit approach. Sampling of multifamily energy model is permitted per ANSI/RESNET/ICC Standard 301 – 2019 5.1.4.4 Sample Ratings for Attached Dwelling Units.	ERI report, showing as built and field verified features and energy performance. For multifamily, worst case scenario for the building is submitted. ERI score matches value entered in scoring tool. <i>Multifamily notes:</i> submit analysis showing the units modeled and corresponding performance. This can be submitted as an Excel table or another file format.	N
Section 701.1.4 - Alternative Bronze and Silver Path (2015 and 2020)	<p><i>Single-Family Homes and Multifamily 3 Stories or Below:</i></p> <ul style="list-style-type: none"> ENERGY STAR Version 3.0 Certified Homes (2015, 2020 – for Bronze) 2018 IECC (2020 – for Bronze) Chapter 11 of the 2018 IRC (2020 – for Bronze) ENERGY STAR Version 3.1 Certified Home (2015, 2020 – for Silver) 	<p><i>Single-Family Homes and Multifamily 3 Stories or Below:</i></p> <p>For ENERGY STAR, model dwelling units using software from RESNET Approved Software List. For common areas, model using software from List 2 or verify using whole-building REScheck report.</p> <p>For IECC or IRC compliance, verify by review of whole-building REScheck report.</p>	<p><i>Single-Family Homes and Multifamily 3 Stories or Below:</i> unitary; unit-by-unit approach, or a building average of a unit-by-unit approach.</p> <p>Sampling of multifamily energy model is permitted per 2018 IECC R405.4.2.</p>	<p>REScheck report showing IECC or IRC compliance. This includes envelope, interior lighting, exterior lighting, mechanical compliance reports and the completed inspection checklist.</p> <p>OR</p> <p>ENERGY STAR certification and energy performance report documentation, showing <u>confirmed*</u> features and energy performance</p>	<p>N (IECC/IRC)</p> <p>Y (ENERGY STAR)</p>

NGBS GREEN ENERGY MODELING GUIDELINES

Compliance Pathway	Baseline/Reference Documents	Eligible Software	Approach	Documentation	Confirmed* Rating Required? Y/N
Section 701.1.4 - Alternative Bronze and Silver Path (2015 and 2020) (CONTINUED)	<p><i>Multifamily 4+ Stories</i></p> <ul style="list-style-type: none">• 2018 IECC (2020 – for Bronze)• ENERGY STAR Multifamily High Rise Version 1.0 Rev. 03 (2015, 2020 – for Bronze)• ENERGY STAR Multifamily High Rise Version 1.0 Rev. 03 with a baseline at ASHRAE 90.1-2010 (2020 – for Silver) <p>For more details on eligibility, visit the ENERGY STAR website.</p> <p><i>(ENERGY STAR Multifamily New Construction can be sought in lieu of ENERGY STAR Multifamily High Rise for comparable energy efficiency levels.)</i></p>	<p><i>Multifamily 4+ Stories:</i></p> <p>For IECC compliance, verify by review of whole-building COMcheck report.</p> <p>For ENERGY STAR, see List 2.</p>	<p><i>Multifamily 4+ Stories</i> whole-building energy modeling</p> <p>Follow ENERGY STAR Multifamily High Rise Simulation Guidelines, available here.</p> <p><i>(If following ENERGY STAR Multifamily New Construction, see guidance documents here.)</i></p>	<p>COMcheck report showing IECC compliance. This includes the compliance certificate, envelope, interior lighting, exterior lighting, mechanical compliance reports and the completed inspection checklist.</p> <p>OR</p> <p>ENERGY STAR certification and energy performance report documentation, showing <u>confirmed*</u> features and energy performance</p>	<p>N (IECC/IRC)</p> <p>Y (ENERGY STAR)</p>
	<p><i>Any Building Size:</i></p> <ul style="list-style-type: none">• IECC Section R401.2.1 (Tropical Zone) (2020 – for Silver)	N/A – Energy Modeling & Documentation Not Required			
701.5 Alternative Gold Level Compliance (2020)	N/A – not accepting compliance via this option				
701.1.6 Alternative Gold Level Compliance for Tropical Zones (2020)	N/A – Energy Modeling & Documentation Not Required				

NGBS GREEN ENERGY MODELING GUIDELINES

Compliance Pathway	Baseline/Reference Documents	Eligible Software	Approach	Documentation	Confirmed* Rating Required? Y/N
EXISTING BUILDINGS – 2012, 2015, and 2020 NGBS					
Chapter 11 Energy Consumption Reduction Path	Reduction in annual energy cost savings or source energy as determined by a third-party energy audit or utility consumption data. Project teams can demonstrate compliance via either modeling or utility documentation.	<i>Single-Family Homes and Multifamily 3 Stories or Below:</i> model dwelling units using software from List 1. For common areas, model using software from List 2.	Entire building, not just altered portions, should be modeled. Same assumption and modeling configurations should be used for both the ‘before’ and ‘after’ analysis. If applicable, the ‘after’ remodel analysis should reflect any additions or other changes to the configuration of conditioned space. Sampling of multifamily energy model is permitted per 2018 IECC R405.4.2 or ANSI/ASHRAE/IES Standard 90.1-2016.	Energy performance reports showing energy savings above pre-renovation conditions OR utility bill documentation for a specific building (as opposed to project-wide calculations, if multiple buildings within a project). Report(s) should clearly show pre- and post-renovation conditions. Energy consumption reduction matches values entered in scoring tool. For more guidance on establishing energy performance baselines for adaptive reuse projects, see the Whole Building Renovations section of VRG Part I. For 2020 NGBS, existing buildings must have their certificate of occupancy issues at least 5 years prior to NGBS Green registration. Pre-renovation document must reflect conditions no more than three years prior to registration.	N
		<i>Multifamily 4+ Stories:</i> whole-building modeling using software from List 2.			

NGBS GREEN ENERGY MODELING GUIDELINES					
Compliance Pathway	Baseline/Reference Documents	Eligible Software	Approach	Documentation	Confirmed* Rating Required? Y/N
CERTIFIED PATH – 2020 NGBS					
Section 1203.11 - Energy Performance Pathway	IECC Section R405	See List 1 or REScheck.	Whole-building approach Sampling is not permitted.	Energy performance report showing energy savings (minimum 7.5%) above IECC. NGBS Green report is utilized when available in the selected software program. Note: the NGBS report includes lighting, appliances, and on-site renewables into the energy savings calculations. Energy savings matches values entered in scoring tool.	N
Section 1203.12 – Prescriptive Path	N/A – Energy Modeling & Documentation Not Required				
Section 1203.13 - ERI Target Pathway	National ERI Target Procedures for ENERGY STAR Certified Homes Version 3.0	See List 1.	Whole-building approach Sampling is not permitted.	ERI report showing ERI value at least 8 points less than reference home. ERI score matches value entered in scoring tool.	N
COMMERCIAL SPACES – 2020 NGBS					
Reference code is 2018 IECC commercial code.					
<i>Energy performance:</i> Projected energy use is based on verified as-built values. Energy demand for commercial spaces should be reflected in the analysis for the broader residential mixed-used building and submitted as part of documentation for New Construction or Renovation certification.					
<i>Other energy efficiency requirements:</i> Verifier should confirm that building features are in compliance with requirements of Section 13.105. Verifiers are expected to confirm that building features, including maximum UA, matches those shown on COMcheck report provided by the Architect or Engineer of Record. Reports should be retained by verifier but does not need to be submitted with verification packet.					

* When sampling is permitted, Sampled ERI or HERS reports can be submitted in lieu of Confirmed ERI reports.

Eligible Software

List 1: Unitary Modeling Software

1. Ekotrope
2. EnergyGauge USA
3. EnergyPro
4. REM/Rate

List 2: Whole-Building Modeling Software

1. DesignBuilder
2. DeST
3. DOE-2.2
4. EnergyGauge
5. EnergyPlus
6. eQUEST
7. Hourly Analysis Program (HAP)
8. IES<Virtual Environment>
9. Open Studio with EnergyPlus
10. TAS
11. TRACE 3D PLUS
12. TRACE 700
13. TRNSYS

Note: Treat software, both single-family and multifamily options, are accepted for Renovation projects.

Sampling of Multifamily (< 4 stories) Energy Modeling

- 1) A unique dwelling unit shall have the same construction type using the same envelope systems, equipment, and appliances. The dwelling unit shall also have the same number of bedrooms, same conditioned floor area ($\pm 10\%$), same infiltration volume ($\pm 10\%$), and same fenestration area ($\pm 10\%$).
- 2) For each unique dwelling unit type, the features, inputs, and specifications that produce the highest energy consumption shall be entered into the approved energy modeling software.
- 3) For each unique dwelling unit type, the exposure, boundary conditions, orientations, and levels within the building that produces the highest energy consumption shall be entered into the approved energy modeling software.
- 4) The energy performance for each unique dwelling unit type must be based on 2 & 3. This energy performance report shall be applied to all dwelling units of that same unit type.
- 5) For common areas, verify using REScheck reports as applicable.

NGBS REFERENCE HOME VALUES (SINGLE-FAMILY & LOW-RISE MULTIFAMILY MODELING)			
Category	Reference		
Building Envelope	2012 NGBS	2015 NGBS	2020 NGBS
Slab	2009 IECC Table R402.1.1	2015 IECC Table R402.1.2	2018 IECC Table R402.1.2
Floor	2009 IECC Table R405.5.2(1)	2015 IECC Table R405.5.2(1)	2018 IECC Table R405.5.2(1)
Ceiling	2009 IECC Table R405.5.2(1)	2015 IECC Table R405.5.2(1)	2018 IECC Table R405.5.2(1)
Door	2009 IECC Table R405.5.2(1)	2015 IECC Table R405.5.2(1)	2018 IECC Table R405.5.2(1)
Insulation Rim/Band	2009 IECC Table R405.5.2(1)	2015 IECC Table R405.5.2(1)	2018 IECC Table R405.5.2(1)
Insulation Walls	2009 IECC Table R405.5.2(1)	2015 IECC Table R405.5.2(1)	2018 IECC Table R405.5.2(1)
Windows	2009 IECC Table R405.5.2(1)	2015 IECC Table R405.5.2(1)	2018 IECC Table R405.5.2(1)
Air Infiltration	2009 IECC Table R405.5.2(1)	2015 IECC Table R405.5.2(1)	2018 IECC Table R405.5.2(1)
Heating System Efficiency	Federal Minimums published June 27, 2011	Federal Minimums published March 12, 2015	Federal Minimums published March 12, 2015
Cooling System Efficiency	Federal Minimums published June 27, 2011	Federal Minimums published March 12, 2015	Federal Minimums published March 12, 2015
Ventilation System Efficiency			
Energy Use of Ventilation Equipment	2009 IECC Table R405.5.2(1)	2015 IECC Table R405.5.2(1)	2018 IECC Table R405.5.2(1)
Duct Sealing			
Duct Air Leakage Testing	2009 IECC Table R405.5.2(1)	2015 IECC Table R405.5.2(1)	2018 IECC Table R405.5.2(1)
Water Heating System Efficiencies	Federal Minimums effective October 25, 2011	Federal Minimums published March 12, 2015	Federal Minimums published March 12, 2015
Lighting	Default lighting and appliance values from ANSI/RESNET 301-2014	Default lighting and appliance values from ANSI/RESNET 301-2014	Default lighting and appliance values from ANSI/RESNET 301-2019
Appliances	Default lighting and appliance values from ANSI/RESNET 301-2014	Default lighting and appliance values from ANSI/RESNET 301-2014	Default lighting and appliance values from ANSI/RESNET 301-2019

Demonstrating Performance Using Alternative Baselines

Ideally, building(s) seeking NGBS Green Certification will be modeled against the energy performance baseline referenced within the standard text. However, we recognize that sometimes it will be more efficient and cost-effective to submit energy performance documentation that is based on an older baseline or another industry code/standard.

Home Innovation accepts energy modeling based on currently accepted versions of the IECC, ASHRAE 90.1, Florida Code, and Title 24.

It is the verifier's responsibility to clearly show his/her calculations of how the modeled performance relates to the specific energy performance baseline within the NGBS. Home Innovation's reviewers will confirm/evaluate performance claims using the comparison tables below.

For example, if a building is built exactly to the ASHRAE 90.1 2013 standard, it would be 2% less energy efficient than the 2018 IECC and 10% more energy efficient than the 2009 IECC. To demonstrate compliance to the 2020 NGBS using ASHRAE 90.1 2013 documentation, the NGBS Green Verifier would subtract 2% from the ASHRAE 90.1 2013 energy performance and include a note on the verification report.

OLDER IECC BASELINES

IECC PERFORMANCE LEVELS COMPARED TO THE 2018 IECC			
	2018 IECC	2015 IECC	2009 IECC
Residential	0	-2	-27
Commercial	0	-3	-12

ASHRAE 90.1

ASHRAE 90.1 COMPARED TO NGBS ENERGY PERFORMANCE BASELINES			
	Percent Above IECC 2018	Percent Above IECC 2015	Percent Above IECC 2009
ASHRAE 90.1 2019	6	9	18
ASHRAE 90.1 2016	3	6	15
ASHRAE 90.1 2013	-2	1	10
ASHRAE 90.1 2010	-8	-5	4
ASHRAE 90.1 2007	-16	-13	-4
ASHRAE 90.1 2004	-21	-18	-9

FLORIDA CODE

FLORIDA CODE RESIDENTIAL CODE COMPARED TO NGBS ENERGY PERFORMANCE BASELINES			
	Percent Above 2018 IECC	Percent Above 2015 IECC	Percent Above 2009 IECC
Florida Code 2020 Residential	0	3	22
Florida Code 2017 Residential	-3	0	19

FLORIDA CODE COMMERCIAL CODE COMPARED TO NGBS ENERGY PERFORMANCE BASELINES			
	Percent Above 2018 IECC	Percent Above 2015 IECC	Percent Above 2009 IECC
Florida Code 2020 Commercial	0	3	24
Florida Code 2017 Commercial	-3	0	21

TITLE 24

Title 24 2019 RESIDENTIAL COMPARED TO NGBS ENERGY PERFORMANCE BASELINES			
Title 24 2019 Residential	Percent Above IECC 2018	Percent Above IECC 2015	Percent Above IECC 2009
WITHOUT PV	36	38	63
WITH PV	81	83	110

TITLE 24 COMMERCIAL COMPARED TO NGBS ENERGY PERFORMANCE BASELINES			
	Percent Above IECC 2018	Percent Above IECC 2015	Percent Above IECC 2009
Title 24 2019 Commercial	60	63	72
Title 24 2016 Commercial	30	33	42

[Energy Efficiency Comparison Tool](#)

Use this tool to compare two energy performance baselines and identify the difference. NGBS Green Partners can use this tool to estimate how close they will be to complying with their target certification level based on local code requirements and/or the builder's past energy achievement.

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1.12 Energy Efficiency Testing Policy

(Adopted January 2020; Revised March 2023)

Effective Date: All projects registered on or after January 1, 2020 must meet the requirements outlined in this policy.

Energy efficiency testing should be conducted in accordance with the following. When tests are performed by someone other than the NGBS Green Verifier, the verifier should collect and retain proof of the professional's credentialing information.

Reference Standards for Energy Efficiency Testing					Sampling Allowed for Multifamily Buildings
Test	Relevant 2020 NGBS Practices	Reference Standards	Qualified Professional	Guidance/Areas to Test	
Building Envelope Tightness / Air Leakage Validation of Building or Dwelling Unit or Sleeping Units (Blower Door Test)	703.4.3.2(1)* 11.701.4.3.2(1)* 705.6.2.1(1) 703.2.4 11.703.2.4 11.705.6.2.1 11.705.6.2.1 1203.7(A)*	ASTM E779 or ASTM E1827 or ANSI 380**	Qualified professional has received infiltration and duct leakage training and certification from one of the following organizations: <ul style="list-style-type: none"> • Building Performance Institute (BPI) • Building Science Institute (BSI) Quality Assessor / Quality Assessment Designee, ENERGY STAR Verifier, ENERGY STAR Field Verifier, Energy Code Compliance Specialist, Energy Code Field Verifier • Residential Energy Services Network (RESNET) 	<p>Building, groups of dwelling units, dwelling unit, or sleeping unit.</p> <p>Air leakage testing should only be conducted after all elements of the thermal envelope, including windows, have been fully installed. While many assume that air leakage results will only stand to improve after additional features are installed, that may not always be true.</p> <p>Where any air leakage result is less than 0.1 over the limit (5ACH or 3ACH, depending on the project's climate zone), it is acceptable to round down to the nearest tenth. For example, a value of 3.06 would round down to 3.0. Where any air leakage result is more than 0.1 over the limit, verifiers are encouraged to improve the air sealing and trouble-shoot to get the number down before retesting.</p> <p><i>Single-family homes: mandatory</i></p> <p>For the 2012 NGBS, testing <u>OR</u> visual inspection is required. For the 2015 and 2020 version, both are mandatory.</p>	Y

Reference Standards for Energy Efficiency Testing					
Test	Relevant 2020 NGBS Practices	Reference Standards	Qualified Professional	Guidance/Areas to Test	Sampling Allowed for Multifamily Buildings
				<p><i>Multifamily:</i> required, unless building is classified as commercial by IECC, and building is in compliance with IECC C402.5 (Air Leakage-thermal envelope). Commercial buildings have option to comply via testing or per C402.5. Also see Multifamily Air Leakage Alternative on page 3 below.</p> <p>If the party performing the testing is not an accredited verifier, a written report of the results should be signed by the party conducting the test and provided to the NGBS Green Verifier.</p>	

Reference Standards for Energy Efficiency Testing					
Test	Relevant 2020 NGBS Practices	Reference Standards	Qualified Professional	Guidance/Areas to Test	Sampling Allowed for Multifamily Buildings
Duct Testing / Duct Leakage	703.1.3 703.4.4 705.6.2.3(2) 11.703.1.2 11.703.4.4 11.705.6.2.3(2) 1203.4* 1203.14*	<i>Mandatory Duct Leakage (703.1.3):</i> ICC IECC R403.3.2 through R403.3.5, as applicable <i>HVAC Duct Leakage Testing (705.6.2.3):</i> IECC R403.3.3 and R403.3.4	<p>Qualified professional has received infiltration and duct leakage training and certification from one of the following organizations:</p> <ul style="list-style-type: none"> • <u>Building Performance Institute (BPI)</u> • <u>Building Science Institute (BSI) Quality Assessor / Quality Assessment Designee, ENERGY STAR Verifier, ENERGY STAR Field Verifier, Energy Code Compliance Specialist, Energy Code Field Verifier</u> • <u>Residential Energy Services Network (RESNET)</u> <p>The person performing the test must be a third-party. The HVAC contractor would not qualify if they are directly involved with installing the system being tested.</p>	<p>Mandatory for all 2015 and 2020 NGBS projects complying with Chapter 7 via the Prescriptive Path, if some or the duct system or air handler is in unconditioned space.</p> <p>Where duct testing is not required nor conducted (i.e., low-rise multifamily projects pursuing performance path), an entry of exempt/untested are to be utilized in the building energy model, if available. Where such entry is unavailable in the modeling software, the threshold percent leakage value should be utilized.</p> <p>Under certain conditions, testing of common areas may be required. See additional guidance.</p> <p>For renovation, duct leakage testing is required if the ducts are being modified or replaced.</p> <p>A written report of the results shall be signed by the party conducting the test and provided to the NGBS Green Verifier.</p> <p><i>For HVAC Duct Leakage Testing:</i> points available under 705.6.2.3 where duct testing is not required by IECC. Sampling is permitted.</p>	Y

Reference Standards for Energy Efficiency Testing					
Test	Relevant 2020 NGBS Practices	Reference Standards	Qualified Professional	Guidance/Areas to Test	Sampling Allowed for Multifamily Buildings
HVAC Airflow Testing	705.5.1 705.5.2 705.6.2.2(1) 705.6.2.2(2) 11.705.6.2.2	ACCA 5 QI-2010, Section 5.2	<p>705.5.1(1-2) awards points when the following professionals are involved with HVAC design and installation:</p> <ul style="list-style-type: none"> HVAC contractor certified by the Air Conditioning Contractors of America Quality Assured Program (ACCA/QA) or equivalent; EPA-recognized HVAC Quality Installation Training Oversight Organization (H-QUITO) or equivalent; HVAC installation technician(s) certified by North American Technician Excellence, Inc. (NATE) or equivalent. <p>Home Innovation recognizes the following multifamily/commercial sector credentials as equivalent to those under 705.5.1(1).</p> <ul style="list-style-type: none"> Associated Air Balance Council (AABC) Test and Balance Technician; Associated Air Balance Council (AABC) Test and Balance Engineer; and National Environmental Balancing Bureau (NEBB) Personnel Certification. 	<p>Testing and balancing demonstrated via flow hood or other acceptable flow measurement tool. Test should be performed within multifamily common areas, unless there are extenuating circumstances (e.g., location of ducts) that make testing difficult. When testing is not performed, an explanation is provided within verification.</p> <p>Verifiers should review and retain testing and balance report for all areas tested.</p>	Y

* = Mandatory practice

** = only referenced in Renovation chapter

[Additional Guidance](#)

Multifamily Air Leakage Alternative

701.4.3.3 states that multifamily buildings four stories or more in height and in compliance with IECC Section C402.5 are automatically in compliance with 701.4.3.1 (building thermal envelope air sealing) and 701.4.3.2 (air sealing and insulation).

This alternative is available for buildings that are 4+ stories and permitted as commercial. If the building is permitted as residential, testing is required per the IECC and NGBS.

If there is question about how a particular building is classified, verifiers should discuss with the builder/developer. Home Innovation is not expected to respond to questions about code eligibility.

Multifamily Common Area Duct Testing

The following guidance should be followed for multifamily common areas (see NGBS definition) but does not necessarily apply to accessory structures or commercial space.

Where low-rise (up to 3 stories) multifamily buildings are complying via the Prescriptive Path and ducts are outside of conditioned space, duct leakage testing is required for multifamily common areas.

In a scenario where units have ductless systems and common areas have ducted systems (or vice versa), testing is required when common areas comprise a significant portion (~30% or more) of the building. The verifier should use their best judgment to determine when to test. Where there are extenuating circumstances (e.g., duct location, room configuration, etc.) that make testing difficult, a verifier may elect not to test. If testing is not completed, an explanation is provided within the verification report.

Regardless of whether testing is completed, visual inspection for sealing is required.

If the units and common areas have any mix of ductless and ducted systems, points cannot be claimed for both completing duct leakage testing (705.6.2.3) and having ductless systems (703.4.1 and/or 703.4.2). Points should be awarded for the predominant system.

1.13 Multifamily Building Radon Testing Protocol

(Adopted September 2020; effective for all projects registered for 2020 NGBS certification)

Radon testing is mandatory in the 2020 NGBS for buildings in Zone 1 unless the occupied space is located above an unenclosed open space.

The radon testing conducted must meet the requirements of 902.3.2 Radon Testing. However, a representative sample is permitted for multifamily buildings in accordance with the sampling protocol below.

Ground-contact occupied areas. At least 25% of ground-contact dwelling or sleeping units must be tested. Ground-contact units are any unit that has floor(s) and/or wall(s) in contact with the ground or is over crawlspaces, utility tunnels, or parking garages. Within each dwelling, test a room located in the lowest livable level that is in contact with the ground or above a crawlspace, utility tunnel or garage. If the lowest level is not currently used but could serve as a den, playroom, office, work area or an additional bedroom at some time in the future, conduct a test in this level.

Measurements must also be collected in non-residential ground contact rooms or areas (e.g., common areas, amenity spaces, utility rooms, storage rooms, exercise rooms, and maintenance rooms) that: a) are occupiable with little or no modification; or b) have air communication with occupiable areas by way of stairwells, elevator shafts or other unoccupied location that may serve as a pathway for radon into occupied spaces on upper floors. When in doubt, it is recommended to test the area. These unoccupied areas may serve as a pathway for radon into apartments and offices of upper floors.

Upper Floors. On the upper floors, conduct a measurement in at least one apartment on each floor; include measurements in at least 10% of the dwellings on each of the higher floors. It is recommended that the upper floor test locations be selected so that units on one floor are not directly above or below units being tested on other floors.

Exemptions: Home Innovation always encourages testing in Zone 1 or for buildings in any location where the developer/owner would like the certainty that testing can provide – NGBS Green is intended as an above-code, high performance building standard. However, there are a few exemptions we recognize. If the garage area is the podium for the residential portion, and the floor above is concrete, the building is exempt from testing. These spaces act more like carports and are open to natural ventilation. Wood framed space over enclosed garages need to be tested. There is some discretion involved here on the part of the Verifier. If you are unsure about a specific building's configuration, take the more conservative approach with the project and/or contact us.

Commercial Spaces. If the retail or other commercial space within a mixed-use building is pursuing NGBS Green Commercial Space certification, radon testing must also be performed in the non-residential areas of the building per 902.3.

For more information and detailed instructions, See ANSI/AARST MAH-2019 [Protocol For Conducting Measurements Of Radon And Radon Decay Products In Multifamily Buildings](#).

2. NGBS GREEN PROGRAM – PROCESS-RELATED GUIDANCE

2.1 Mandatory, Free Registration

(Effective November 2012; Revised November 2021)

NGBS Green certification has a mandatory online registration process. Registration is free.

Only accredited NGBS Green Verifiers can register projects for certification. Projects are registered at <https://axis.pivotalenergy.net/>.

A project, for purposes of registration, is defined as one of the following: a single-family home; a stand-alone multifamily building; one phase of a residential land development; development/community of multiple multifamily buildings; a development/community of mixed multifamily and single family, or a small remodeling project. Single-family homes must all be registered separately, even if all homes within a community will seek certification.

A verifier can register a project any time after he/she has a formal commitment with a client for verification services.

Registration provides each project with a unique Project ID. The Project ID is required at: (1) rough verification report submission; and (2) final verification report submission.

2.2 Rough/Final Verification Reports

(Effective August 2008)

There are two verification inspections for most projects: rough and final. The same spreadsheet is used for recording both the rough and final inspections. The verification report includes a cell to indicate if the submission is for a rough or final inspection. Please accurately note the inspection phase being conducted. The Rough/Final report type controls which items are mandatory based on the verification phase. Mandatory items for a Final inspection will not be highlighted if the report still says Rough. Do not change any entry in the rough column when preparing the final. If something was incorrectly recorded or missed, correct it in the final column and add a note of explanation.

2.3 Alternatives for Builder Signature

(Effective October 2011, Deleted November 2021)

As of November 2021, Home Innovation no longer requires builder and verifier signatures on submitted verification report.

The signature fields have been removed from the Rough and Final Summary tabs (previously titled “Rough Signature” and “Final Signature” within the NGBS Green Scoring Tools. Builder and verifier contacts, inspection date/time, team verification, batch submission, and sampling section should still be completed.

2.4 Project Address Changes

(Effective June 2013, Revised November 2021)

Home Innovation does not need to be notified of an address change if the home was registered with a lot number (if the lot number was correct) when the final report has a postal address. Verifiers should ensure the address is correct in AXIS.

The address on the verification report must match the address for the building that was inspected. The final report must contain the physical address of the project. The NGBS Green certificate cannot be issued with a Lot # or PO Box.

2.5 Certificate Reissuance

(Revised November 2014; March 2019, November 2021)

Clients can reprint NGBS Green certificates on the AXIS portal as many times as necessary for no additional fee. A \$50 administrative fee is charged for a correction of a certificate that is not the result of a Home Innovation error. This includes instances where the builder company name in our database is different than how the builder wants to be listed on the NGBS Green certificate, as ample opportunity is provided for the builder to confirm the correct company name prior to the certificate being sent. NGBS Green Verifiers are responsible for informing clients of this administrative fee.

Anyone may request an NGBS Green certificate for a home, multifamily building, or land development provided they pay the administrative fee.

2.6 Certificate Reissuance for New Certification Level

(Effective January 2022)

If upon re-evaluation a building has sufficient points to earn a higher certification level than the level that was initially reviewed and certified, the Verifier can re-submit the verification report(s) following the process below.

- Email Lynda with the Project ID/address or certificate number
- Pay the administrative review fee
- Re-submit the corrected final verification report with detailed notes as to where the additional certification points came from
- Home Innovation review and re-issue a new certificate – please note this review might take up to a week as it will be reviewed by a senior reviewer

2.7 Verifier Changes / Reassignment

(Revised March 2019)

If a client would like to change the Verifier hired to provide verification services after a project has been registered (and it is a Verifier from a different Company), the client must email Home Innovation to notify us of that change. If we have already received the rough inspection documentation for the project, on request of the client we will provide the new verifier with the rough documentation submitted for review so that it can be used for the final inspection. Verifiers within the same company can switch between projects without notifying Home Innovation.

2.8 Overnight Delivery

(Revised November 2014)

NGBS Green certificates are delivered online. However, if a builder needs a hard copy for whatever reason, Home Innovation offers overnight delivery.

2.9 NGBS Version Transition

(Revised October 2016)

No fee is charged for a project to transition from one NGBS version to another NGBS version before the rough inspection and before the completion deadline has passed.

A \$50 review fee is charged when a building seeks to transition from an earlier version of the NGBS to a newer version after the completion deadline is passed, if the rough inspection has already been completed and verification report submitted.

2.10 Batch Submission Protocol

(Effective 5/15/15; Revised 8/10/15; Revised 3/13/17; Revised 01/09/20; Revised 11/15/21; Revised 4/14/22; Revised 9/29/22; Revised 8/14/23)

Scope: Batch Submission Protocol is an alternative submission process for verification reports to the standard process outlined in the Verifiers' Resource Guide (VRG). Batch submission is intended to reduce paperwork associated with verification, not verification stringency.

Batch submission is available for the New Construction, Renovation, Single-Family Certified, and Commercial Space pathways. Batch submission is not available for Accessory Structures.

Single-family Batch submission is available for use by any NGBS Green Verifier with multiple single-family homes constructed by the same builder (other restrictions apply depending on scoring pathways pursued, see below).

Multifamily Batch Submission is available for multifamily buildings within the same registered project. Only Master Verifiers can utilize batch submission for multifamily buildings.

Intent: The Batch Submission Protocol allows accredited NGBS Green Verifiers to submit one verification report for multiple homes/buildings built by the same builder. Each building must be fully-inspected per the VRG and the relevant NGBS practices verified at rough and final. Homes/buildings included in the batch must comply with the same practices, which are reflected on the verification report.

Objectives:

- Streamline documentation by reducing the number of verification reports that must be completed.
- Reduce the time and cost for the NGBS Green Verifier to manage verification documentation.

How It Works:

- The Verifier must register the homes or buildings.
- Batches can be between 2 and 50 homes/buildings.
- Buildings included within a batch must be located within the same county.

- All homes/building within a batch must have the same type of heating and cooling systems.
- Single-family homes can be detached or attached (e.g., townhouses, row-houses). A batch can include a mix of attached and detached homes, provided that the features are similar enough to be scored the same.
- For multifamily, buildings of varying heights and unit counts can be grouped. However, a batch should NOT include a mix of both low-rise (up to 3 stories) and high-rise buildings (4+ stories), as those buildings are subject to distinct code requirements.
- Single-family homes must have the inspections completed within a 60-day period. There is no time limit for multifamily projects. NGBS Green Verifier performs full verification, as outlined in the Verifiers Resource Guide, on each building. Verification of buildings must be complete before the batch is submitted.
- For points to be awarded, every building in the batch must comply with the relevant practices. If the point level for NGBS practices varies between homes/buildings the verifier should either (a) submit a report claiming the fewest points for practices in all the homes/buildings, OR (b) submit a separate verification report for each home/building and the homes/buildings will no longer be reviewed as a batch.
- The NGBS Green Scoring tools include additional fields to convey the project numbers, addresses, and inspection dates of all homes within a batch.
- Each batch submission should include the following:
 - 1 Batch Submission Verification Report.
 - Photos of each home, with files named to properly identify which photos correspond to each building address. When submitting a batch, consider utilizing the “Description” box (shown as part of the File Upload menu) to identify the address that corresponds to each building photo. That will help our Green Reviewers feel confident that a photo of each building was submitted, with no duplicates or missing items.
 - A single energy report or certificate that reflects the worst-case for the buildings within the batch (dependent on the Energy Efficiency compliance path pursued).
 - A single WRI tool that reflects the worst-case for the buildings within the batch (dependent on the Water Efficiency compliance path pursued).
- Additional requirements by certification pathway:
 - *New Construction*: The energy efficiency report for the worst-case in the batch must be submitted and values entered within the verification report.
 - *Renovation*: if pursuing energy and/or water performance pathways, details of the worst-case scenario should be documented in the Scoring Tool, in the separate Optional Remodel Performance Tool, or in a separate analysis.
 - *Single-Family Certified*: all energy efficiency testing values must be entered on Summary pages for all homes within batch.
- Home Innovation will issue an individual NGBS Green certificate for each home/building in the batch.

2.11 Alternative Multifamily Verification Protocol (Sampling)

(Updated January 2020; June 2023)

Note: The May 2023 update to this protocol expanded sampling application to build-to-rent single-family homes. Home Innovation recognizes that build-to-rent development typically employs a higher level of quality assurance and crew consistency than for-sale homes. Sampling remains unavailable for for-sale home construction or renovation.

i. Verifiers Accreditation Criteria

- a. Any NGBS Green Verifier can employ the following protocol when performing Energy Efficiency Testing (for specific practices, see policy) on multifamily buildings or build-to-rent single-family homes. If employing an NGBS Green Field Inspector or HERS Rater to conduct testing, those individuals are able to sample under the direction/supervision of the verifier.
- b. NGBS Green Master Verifiers can employ the protocol for all other NGBS practices, except those identified as exceptions under Section iii, Application of Sampling. A Master Verifier can work in partnership with another accredited NGBS Green Verifier on the inspection of sampled units, provided that the procedure outlined above is fully executed, and the NGBS Green Master Verifier is the Verifier-of-Record for the Project.

ii. Responsibilities of NGBS Green Verifiers

- a. NGBS Green Verifiers are responsible for ensuring that all Alternative Verifications conducted and issued comply with the Verifier's Resource Guide and NGBS Green Program Policies. Abuse of this protocol and/or any other additional relevant NGBS verification policies may result in the Verifier's accreditation being revoked and may jeopardize the building's certification.

iii. Technical Protocols

- a. **Note:** This protocol provides an alternative verification approach for units within a multifamily building or set of multifamily buildings where verification is only performed on a set of sampled units. This protocol is distinct from the Batch Submission Protocol, where full verification is performed across multiple single-family homes or multifamily buildings but only 1 verification packet is submitted.
- b. The protocol can be employed at rough and/or final inspection at the NGBS Green Verifier's discretion.
- c. **Units Eligible to be Sampled**

Building or project with 20 or more multifamily units. Where a community of single-family units are designed as rentals, sampling is permitted, regardless of whether they are registered as multifamily or single-family.

Units sampled shall be of the same construction type, using the same envelope systems.

d. Acceptable Sample Set

Sampling can be employed across units within the same multifamily building and/or across multifamily buildings within the same community. Sample sets need not be the same at rough inspection and at final inspection; sample sets can be entirely different.

Units chosen for verification from within a sample set should be chosen at random to the extent practical. A sample set should include a proportional number of each unit type (e.g., 1 bedroom; 2-bedroom, one bath; 2-bedroom, 2 bath, etc.).

Where features (i.e., appliances, fireplaces, decorative elements) vary based on the residents/owners/users, such as for top (penthouse) or first floors (lobby, common areas), full verification is required for the NGBS practices associated with those features.

If the construction superintendent and/or trade foremen change during construction, NGBS Green Verifiers are encouraged to share their plan for sampling with the new personnel.

The following sample set sizes are allowed, based on verifier experience and credentials:

- 1 in 5 units – NGBS Green Verifiers with less than 2,000 verified multifamily units (*Sampling of Testing Practices Only*)
- 1 in 7 units – NGBS Green Verifiers with 2,000 or more verified multifamily units; NGBS Green Master Verifiers (*Full Verification Sampling, with Exceptions*)

Verified units are based on total verified units of verifier of record (individual signing signature pages) at time of inspection notification. See [Multifamily Verifier list](#).

Sample set is made up of 5 or 7 units (depending on verifier's experience/credentials) or more at the same stage of construction (e.g., ready for a rough or final inspection) on the inspection date. Sample sets need not be carried through from rough inspection to final inspection.

At least 1 in 5 or 7 (depending on verifier's experience/credentials) units must be inspected per sample set and per the entire project.

iv. Eligibility

To qualify for sampling, a verifier shall conduct a complete verification of all NGBS practices on the first seven (7) units within the first building without any incidence of failure. Successful verification of the initial units will allow the Verifier to use sampling throughout building and/or community until a "failure" occurs on any NGBS practices. Complete verification of 7 units is not required for each subsequent building within the same community constructed by the same builder.

v. Application of Sampling

Verification should be performed at a minimum ratio of one (1) test or inspection per 5 or 7 units within a given sample set.

If individual units have optional design elements (appliances, fireplaces, cabinets, etc.) and points are claimed for practices associated with those design elements, full verification of these NGBS practices must be completed on all units or verified through documentation (e.g., order slips, delivery tickets) following standard VRG protocol.

Multifamily common areas, including amenity areas like gyms and clubrooms, should not be sampled. All spaces should be visually inspected to ensure that installed features meet the same NGBS practices as the dwelling units. Where necessary, energy efficiency testing may be required per Energy Efficiency Testing policy.

For single-family build-to-rent: construction superintendent or another on-site professional must collect photo evidence that the following mandatory practices are met in every home, even those not selected for inspection. Verifier must review and approve provided photos. If any photos show non-compliance, corrective action is required, and full verification is required for next seven (7) homes. Full visual inspection per the VRG is required for all homes selected for inspection.

602.1.9 Flashing

701.4.3.2.1 Grade I Insulation Installation

901.3(1) Garages

902.3(1a) Radon Reduction Measures

1202.7 Flashing

1205.3(1a)

1205.9 Radon Control

Exceptions:

- If complying with the Energy Efficiency chapter via either the HERS or Alternative Bronze/Silver paths, the project team should adhere to all policies and protocols of the selected program to achieve a confirmed rating or certification from the oversight body.
- 2012 NGBS 703.1.2 – Sampling is not permitted; every unit should be inspected to confirm insulation installed exceeds Grade III. *Note:* sampling of insulation installation is permitted under the 2015 and 2020 NGBS versions.
- 2020 NGBS 705.6.1 – Per the 2020 NGBS, a representative sample inspection of a minimum of 15 percent of the buildings or dwelling units or sleeping units is permitted.
- 2020 NGBS 902.3.2 – Per Multifamily Building Radon Testing Protocol, a representative sample is permitted. At least 25% of ground-contact dwelling or sleeping units must be tested and at least 10% of dwelling units on each higher floor.
- 2020 NGBS 1203- Per the 2020 NGBS, no sampling allowed for any Certified Path Energy Efficiency practices.

vi. Verification of Units

Interpretation of the practices and documentation requirements must otherwise follow the VRG.

When sampling begins, the Verifier may either verify all claimed practices on a single unit OR distribute the practices across multiple units within a given sample set, provided that the all claimed practices are verified at a frequency that meets or exceeds the 1:5 or 1:7-unit ratio outlined above.

vii. Failure

“Failure” is defined by inability for a Verifier to confirm compliance with any mandatory practice or award points for any claimed optional practice.

Should failure occur for an optional practice, the Client has a choice between (1) the Root Cause Analysis & Preventive Action procedure outlined below to address failed item(s) or (2) not receiving NGBS points for failed practice(s) for the entire building.

Should failure occur for a mandatory practice, the following procedure must be followed.

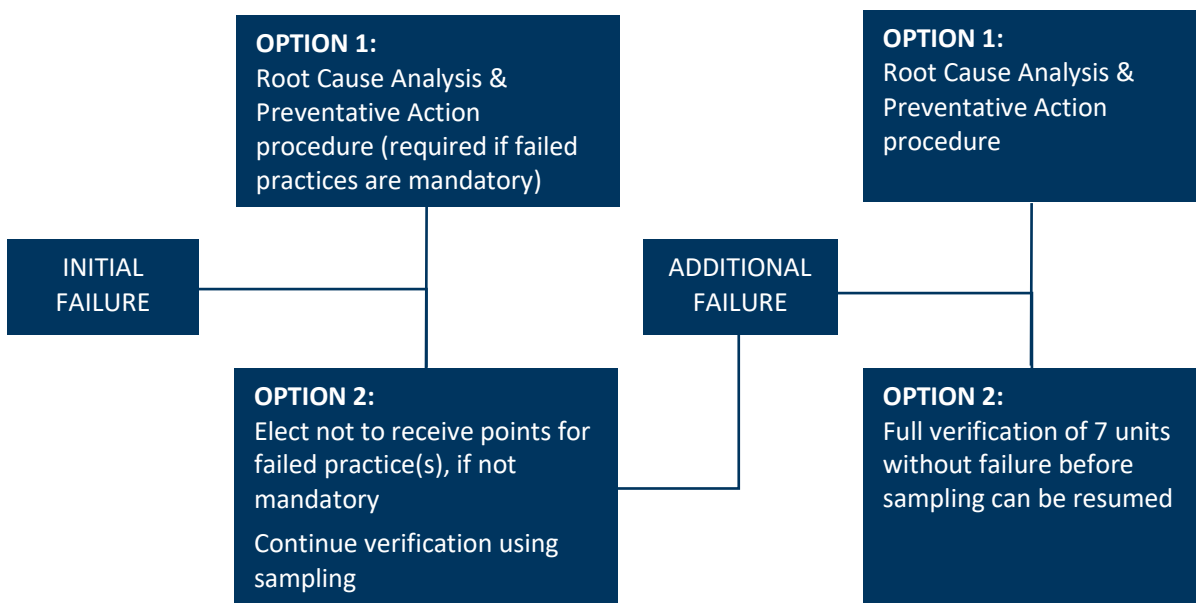
When an “initial failure” occurs, the failed practices(s) shall be verified in two additional units selected from the same sample set during the same inspection. If the failed practices are successfully verified in the additional two units, then sampling can proceed for the building/community.

If an “additional failure” occurs in one or more of the two additional units, two options are available to remedy the issue: (1) completion of a Root Cause Analysis & Preventive Action analysis outlined below and successful implementation of preventative action plan; or (2) Full verification of seven (7) units without failure before sampling can be re-instituted. The general contractor and/or construction superintendent should sign the root cause analysis document. The verifier should retain any root cause analysis reports in project files for a minimum of three (3) years.

Regardless of the option selected, all units within the sample set that identified the failure must be 100% verified per the VRG for the failed practice(s), and any issue(s) identified must be corrected by the builder and re-inspected by the Verifier.

If no additional failures are identified, sampling may continue once that issue has been corrected by the builder.

Addressing Failure



viii. Root Cause Analysis & Preventive Action

Should the builder or verifier decide not to fully inspect seven additional units to address a failure as noted above, the builder/developer must conduct a “root cause analysis” on the NGBS practice(s) that resulted in failure before sampling can resume. The builder/developer should submit a written explanation of the failure and the plan to prevent any reoccurrence to the Verifier. Sampling may resume, provided that the Verifier has confirmed that the analysis and preventive actions appears to be appropriate and effective.

The “root cause analysis” report shall contain at a minimum:

- A written description of the problem(s) covered by the analysis;
- A written explanation of the underlying reason(s) that the problem(s) occurred (e.g., inadequate training of subcontractor(s) or site supervisors, insufficient information or inadequate detail in the plans or specifications, etc.);
- A written description of a clearly defined process to correct the underlying cause(s); and
- A written description of when and how that preventive action has been implemented.

Root cause analysis reports do not need to be uploaded to AXIS. However, they may be requested as part of a desktop audit request.

ix. Administration

Verifiers should identify at registration that the inspection will be verified via the NGBS Alternative Multifamily Verification Protocol.

On the Verification Report, the Verifier must identify the sample set range and units sampled, as well as the specific roles of the Verifier(s) involved with the project (if multiple verifiers inspected the project).

Single-family build-to-rent projects have two options for documentation and submission:

- Batch submission of all homes within a given sample set; sampling table is completed within the batch workbook
- Each home is submitted individually; verification schedule for all homes within sampling set is captured within a separate document that is uploaded to each home record

x. Communication with the Builder/Developer

Use of sampling is always at the Verifier’s discretion. For any specific project, the Verifier should only employ it when they have confidence that the builder will be able to construct an NGBS compliant building. Regardless of whether a Verifier selects to use the sampling or not, Verifiers should clearly communicate to their clients that corrective action, unexpected inspections, and even delays, may be necessary to attain NGBS Green certification if compliance issues arise during the construction process. Verifiers should communicate to clients that units selected for sampling must be random and cannot be directed by the builder team.

xi. Certification & Marketing Considerations

NGBS Green Certification is granted at the building-level and not to specific multifamily units. Review for certification can only proceed once the sampling protocol is successfully completed for the entire building. No distinction is made between units that underwent inspection and testing and those that did not on green certificates or marketing collateral.

3. NGBS GREEN VERIFIER ACCREDITATION POLICIES

3.1 Maintaining Verifier Accreditation Policy

(Revised November 2014)

NGBS Green Verifier accreditation is specific to an individual; a company or organization is not accredited. If an individual intends to provide verification services on behalf of an organization for which the verifier is not the sole owner, an officer of that company must provide consent.

Verifier accreditation is portable and a Verifier can maintain their accreditation at no additional cost even if they switch employers, provided that the Verifier re-submits proof of insurance, an application, and a signed agreement prior to the expiration date of their accreditation. If a verifier is unable to submit new insurance and a complete Verifier Agreement prior to the expiration date of their accreditation, s/he will be required to re-submit payment along with a new application. If the application is not renewed within the 30-day grace period, the Verifier must start the accreditation process from the beginning, including the training and exam.

If Home Innovation is informed that a Verifier was removed from his/her job due to reasons that may reflect poor performance and/or lack of compliance with Home Innovation's verification protocols, the Verifier's accreditation will be suspended until Home Innovation completes an audit and is satisfied that the Verifier is competent to provide verification services.

Full terms of NGBS Green Verifier accreditation are outlined in the Verifier Agreement.

3.2 Verifier Termination Policy

(Revised November 2014)

Home Innovation reserves the right to terminate an NGBS Green Verifier for a variety of reasons, including but not limited to:

- Failure to provide accurate, credible, and timely verification inspections and reports
- Failure to remain independent
- Failure to renew the accreditation annually
- Failure to maintain the required insurance
- Lack of verification activity

Verifiers should consult the Verifier Agreement to review all the items that are enforceable with termination.

NGBS Green Verifiers who are terminated due to violation of any of the below requirements are reminded of the provisions of the verifier agreement which are enforceable after termination. These

items include prohibition of service to a competing program for one year and the requirement to dispose of any proprietary information about the NGBS Green program.

Violation of the Non-compete Clause – Paragraph 8.3 of Verifier Agreement

- Verifiers must not provide services to other NGBS-based programs.

NGBS Green Verifiers are prohibited from providing verification services for a program based substantially on the National Green Building Standard ICC-700. NGBS Green Verifiers are expected to understand the NGBS and other programs that they are participating in well enough to recognize when they violate this clause.

Verifiers may provide verification services for other non-NGBS certification programs.

Home Innovation vigorously protects its intellectual property and believes that an individual or company cannot service a program based on the NGBS without utilizing knowledge gained from participating in the Home Innovation NGBS Green program.

Being listed or advertised, on a website or in other materials, as a verifier/rater for an NGBS-based program is enough evidence for Home Innovation to terminate a verifier. NGBS Green Verifiers who violate the non-compete clause will be notified in writing, along with the associated company management if applicable, that the verifier is immediately terminated.

Verifiers can provide verification services for any other green certification program based on another rating system or standard.

Verifiers terminated for this reason may not reapply for a period of one year. When s/he reapplies, acceptance is at the discretion of Home Innovation.

Conflict of Interest or Failure to Remain Independent – Paragraph 8.9 of Verifier Agreement

- Verifiers must remain independent.

NGBS Green Verifiers shall not have any conflicts of interest and must remain independent from the clients whose projects they are verifying such that the credibility of their verification is not open to question.

NGBS Green Verifiers are strongly encouraged to be careful to avoid potential conflicts and to ask Home Innovation for clarification prior to undertaking any activity that might be a conflict or jeopardize their independence.

NGBS Green Verifiers who do not maintain independence will be notified in writing, along with the associated company management if applicable, that the Verifier Agreement has been immediately terminated. NGBS Green Verifiers terminated for this reason may not reapply for a period of one year. When s/he reapplies, acceptance is at the discretion of Home Innovation.

Failure to Complete Annual Renewal – Paragraph 1.3 of Verifier Agreement

- Verifiers must renew accreditation annually.
- Failure to renew accreditation in a timely manner requires the verifier to repeat the entire training, testing, and application process.

NGBS Green Verifiers must renew their accreditation annually and are notified on the first of the month when their accreditation is set to expire. A follow up reminder is sent around the 15th of the month. Notification is sent via an email generated by the online Training/Testing Center and directly from Home Innovation.

If the renewal is not completed within the specified time period, verifiers are notified via email that they have been removed from the website for failure to renew their accreditation. This final email includes a 30-day termination notification pursuant to Paragraph 2.2 of the Verifier Agreement. Verifiers who complete the renewal within 30 days will be reinstated and re-listed on the website. If the accreditation is not renewed within that 30-day grace period, then the NGBS Green Verifier (and company management, if applicable) is notified by email that the agreement has been terminated.

NGBS Green Verifiers terminated for this reason may re-apply immediately.

Failure to Maintain Appropriate Insurance – Paragraph 6.2 of Verifier Agreement

- Verifiers must maintain insurance.
- Failure to update insurance with Home Innovation Research Labs will lead to termination.

NGBS Green Verifiers are requested via email to provide an updated certificate of insurance approximately 30 days before the insurance expiration date on the certificate of insurance on file. If an updated insurance certificate is not received by the expiration date, the NGBS Green Verifier will be notified by email that they have been removed from the website and must provide the updated insurance information within 30 days, or they will be terminated. During this 30-day period after a verifier's insurance has expired, the verifier's accreditation is suspended and Home Innovation will not accept verification reports, and the NGBS Green Verifier will not be able to access the Verifier Resource Center webpage.

If the insurance information is received within the 30-day post-expiration period, the NGBS Green Verifier will be reinstated and re-listed on the website. Verification inspections conducted while an NGBS Green Verifier's accredited status is suspended may be accepted once evidence is provided that the insurance was effective at the time of the inspection.

If the insurance information is not updated, the NGBS Green Verifier (and company management, if applicable), will be notified by email that the agreement has been terminated. NGBS Green Verifiers who have been terminated for this reason must re-apply for accreditation, complete the training and testing, and submit a new application, agreement, and evidence of insurance in order to be reinstated. Verification inspections will not be accepted from terminated verifiers.

Lack of Activity – Paragraph 2.2 of Verifier Agreement

- Verifiers are expected to stay active in and current with the certification program.
- Verifiers who do not submit at least one verification report in a two-year period may be terminated.

NGBS Green Verifiers who do not submit any verification reports within a two-year period will be reviewed for possible termination. Other required activities, such as opening and reading Verifier Updates, may be considered in this review.

If Home Innovation decides to proceed with termination due to inactivity, the NGBS Green Verifier will be given a 30-day notice prior to termination. At the end of the 30-day period, if the NGBS Green Verifier has not had any new verification activity, the NGBS Green Verifier (and company management, if applicable), will be notified by email that the agreement has been terminated. NGBS Green Verifiers terminated for this reason must re-apply for accreditation, complete the training and testing, and submit a new application, agreement, and evidence of insurance in order to be reinstated.

Poor Performance— Paragraph 2.3 of Verifier Agreement

- Client complaints of poor performance may lead to termination.
- Inaccurate verification or lack of compliance with the Home Innovation’s protocols may lead to an audit and/or termination.

NGBS Green Verifiers serve as Home Innovation’s field agents and are expected to provide accurate, credible, and timely verification inspections and reports. Home Innovation provides specific feedback to verifiers when verification issues are identified, as well as general guidance in monthly *Verifier Updates*.

NGBS Green Verifiers who do not consistently provide acceptable verification reports and verification services may be terminated at Home Innovation’s discretion.

Beyond report quality, complaints from clients or homeowners are also factored into Home Innovation’s assessment of verifier performance. Home Innovation will fully investigate all complaints received.

Home Innovation will typically provide a 30-day notice of poor performance issue. However, immediate termination is possible. Termination notices are sent in writing. Verifiers (and company management, if applicable) will be notified via email that the agreement has been terminated (company management, if applicable). Verifiers terminated for this reason may not reapply for a period of one year, and acceptance is at Home Innovation’s discretion.

Responsibility of Home Innovation

Home Innovation will attempt to contact any builders who have registered projects with terminated verifiers and inform the builder(s) that another accredited verifier will need to be hired to finish the project. Home Innovation will assist the builder, if needed, in finding another accredited NGBS Green Verifier to complete the verification process.

3.3 Verifier Performance

(Effective April 1, 2015; Revised August 1, 2016; Revised September 15, 2020; Revised November 15, 2021)

The credibility and integrity of the NGBS Green program relies on the performance of Home Innovation’s independent agents in the field. NGBS Green Verifiers are expected to fully comply with the Verifier’s Resource Guide with regard to inspection of projects seeking certification and completion of verification reports. NGBS Green Verifiers are also evaluated for their investment in staying informed of NGBS Green program policies and key program updates.

Verification Report Review

Each verification report provides the Home Innovation review team a snapshot of a verifier’s:

- Understanding of the NGBS practices and compliance requirements

- Adherence to the verification protocol and certification process outlined in the Verifier's Resource Guide
- Attention to detail

A verifier can earn an A, B, C, D, or F grade for a given verification report based on accuracy and completeness. Projects seeking higher levels of certification (i.e., Gold or Emerald) will be reviewed with greater stringency. These projects may receive more follow-up questions.

Verifiers are expected to interpret, discuss, and learn the NGBS. A demonstrated misunderstanding of the NGBS practices, verification protocol or failure to adjust verification reports will warrant lower grades on verification reports.

Verifier grades are available for review in the AXIS portal.

Home Innovation reviewers will add notes within the AXIS QA portal in the following scenarios:

- (1) Points incorrectly awarded for a NGBS practice(s) for which there was a recent policy change or interpretation.
- (2) Comments in the verification report gives the perception that the verifier does not understand a NGBS practice.
- (3) Points were incorrectly awarded for a NGBS practice(s) where repeated mistakes have been observed (either by a specific verifier on multiple reports and/or repeated mistakes across multiple verifiers within the same company).

An informational email to clarify an interpretation when points denied is <10 - will not affect grade.

Verifier Organization Admins can view grades for all accredited verifiers employed by their organization.

Verifier Performance Issues

Verifiers receiving a grade of "C" as an average grade are encouraged to discuss verification issues with the Senior Manager, Green Building Programs.

Verifiers receiving a "D" or an "F" as an average grade will enter a 1-year probationary period. Accreditation renewal after the probation period will be contingent upon the verifier's performance and completion of remedial actions.

Effective March 2015, new verifiers to the NGBS Green program and those becoming re-accredited after a 14-month or longer lapse in accreditation enter 1-year probationary period upon accreditation.

Home Innovation may also put a verifier on probation mid-term, should performance issues warrant immediate action.

Verifiers under probation will be expected to discuss performance issues with the Senior Manager, Green Building Programs at time of renewal and submit evidence of at least 4 hours of CEU credits. Verifiers under probation for performance issues will be asked to complete additional CEUs on topics suggested by Home Innovation's review team.

Verifiers under probation will be subject to more frequent Desktop Reviews and Virtual Audits.

Verifiers with performance issues are ineligible to become Master Verifiers until an average grade of “B” or higher is maintained for a one-year period.

Master Verifiers receiving a C or below for two consecutive periods will have their Master Verifier credential revoked. Those individuals would need to wait 12 months before reapplying and re-testing for that recognition.

Grade Appeal Process

Home Innovation works to ensure that its Green Reviewer team members consistently issue grades per the Performance Policy Grading Rubric. However, it is possible that grades may be influenced by bias or human error. Given that, Home Innovation affords verifiers the opportunity to appeal a grade for a different result.

- A verifier can appeal a grade decision within 30 days of issuance.
- To appeal a grade, a verifier must submit the following to gbverifications@homeinnovation.com:
 - Verifier Name
 - ProjectID(s) and/or link(s) to AXIS project record
 - Report Phase (Rough/Final)
 - Grade Issued
 - Action Requested
 - Justification
- In preparing their appeal request, we recommend that Verifiers go line-by-line through the grading rubric and try to objectively assess their grade as if they were an HI Green Reviewer. The results of that exercise can be included within the Justification section of an appeal request.
- Upon receipt of a verifier grade appeal, the project review files will be provided to another green reviewer for a second opinion.
- The Senior Manager, Green Building Programs (Cindy) will then evaluate the appeal justification against the initial and second review assessments, respond to the verifier, and adjust the grade, if appropriate. [If the Senior Manager, Green Building Programs was the initial reviewer, the evaluation and response will be assigned to another Green Team member.]
- Should the re-evaluation not result in the verifier’s requested action, a \$30 appeal fee will be assessed.
- Home Innovation regularly monitors green reviewer grades to ensure consistency. Green reviewers who are subject to multiple appeal requests resulting in adjusted grades will be subject to additional review and mentoring.

NGBS Green Verifier Grading Rubric

VERIFICATION GRADES (Rough Report based on 1-3; Final Report based on 1-5: all 12 considered)	A	B	C	D	F
1) Scoring Spreadsheet (30% of Rough, 20% of Final) Scoring spreadsheet is current version available on www.homeinnovation.com/GreenScoring .	Current version is used		Spreadsheet is outdated by < 1 year		Spreadsheet is outdated by > 1 year
2) Appropriate Practice/ Denial – (30% of Rough score, 20% of Final) Error where practices awarded don't align with project information provided.	<5 pts	5-10 pts	11-20 pts or 1 missed mandatory practice	21-30 pts	>30 pts or 2+ missed mandatory practices
3) Photos – (40% of Rough score, 20% of Final) Photo reflects current verification phase (Rough or Final). Photos are taken from the curb/driveway entrance, show full front elevation and adjacent landscape. Photos are clear, appropriate size/resolution for reviewer to see Lot Design practices- no thumbnail shots. When project design includes atypical features that may prompt reviewer questions, additional photos are included within initial submission.	Good	Adequate	Fair	Poor	Missing
4) Recommendations on rough report not addressed at final (20% of Final)	0	1	2	3	4
5) Point Thresholds for Chapters (20% of Final score) Point shortfalls of minimum chapter requirements for targeted certification level.	0	0	1	2	3
NOMINAL CONSIDERATION IN GRADING:					
6) Energy Report – (applies to Final Report) An Energy Performance Report must be submitted for most Chapter 7 compliance pathways. Energy modeling should be conducted according to the	Good		Does not match		Missing

VERIFICATION GRADES (Rough Report based on 1-3; Final Report based on 1-5: all 12 considered)	A	B	C	D	F
Energy Modeling Policy. Energy performance should match that claimed in the verification report.					
7) Application of Sampling Protocol Where sampling was indicated at registration, details about available and sampled units is completed within verification report. Ratio of available and sampled units should align with protocol. When prepared, root cause analysis is submitted.	No issues		1-2 follow-up questions		3+ questions / issues identified
8) Follow-up Notes	0*	1	2	3	4
9) Verifier follow-up duration	None req*	< 5 days	5-10 days	11-20	> 20 days
10) Failure Cells (red or yellow) Quantity of red or yellow cells on report (e.g., ignoring the scoring sheet cells)	0	1	2	3	4 +
11) Failure to address a recommendation through numerous reports	Good response		Limited		No response

* A higher level certification justifies 1 follow up email with less than a 5-day turnaround by verifier.

Desktop Audits

A desktop audit is a review of plans and other compliance documentation. A desktop audit requires a Verifier to submit to Home Innovation documentation that the Verifier would be required to collect as part of their verification to demonstrate a building's NGBS Green compliance.

Desktop audits do not require Verifiers to collect plans, documentation, or other information that is beyond what they would normally collect. Home Innovation's objective is to confirm a Verifier is collecting the documentation and following the verification guidance outlined in the VRG. Desktop audit submissions should be concise and are evaluated for completeness and alignment with the VRG, as well as the Verifier's responsiveness to questions.

When submitting lengthy plans or reports, please make notations (e.g., circle, highlight, text box) within the document(s) to identify the areas that support your justification for awarding the practice(s). This helps our Reviewers to match the documentation more quickly to the desktop audit items requested and offers additional information about your reasoning for awarding points. It is also acceptable to extract selected pages or provide screengrabs rather than uploading entire plan files to AXIS.

A Verifier can earn an A, B, C, D or F grade for a desktop audit.

Desktop audit grades are available for review in the AXIS portal and are included as part of a Verifier's overall grade average that is reviewed for performance issues.

DESKTOP AUDIT GRADES	A	B	C	D	F
(1) Completeness (30%) All requested documents are included with the submission.	All items provided.	1-2 missing items	3-4 missing items	5+ missing items.	Desktop audit request ignored.
(2) Appropriate Documentation Provided (30%) Documents match those requested in the VRG. Documents demonstrate compliance and align with information included within Scoring Tool.	No issues.		1-2 questions/issues identified		3+ questions/issues identified
(3) Accessibility (10%) Documents are succinct, clearly demonstrating compliance	All items efficiently demonstrate compliance	1-2 items require user input to determine compliance	3-4 items require user input to determine compliance	5+ items require user input to determine compliance	Large manuals, specification sheets, etc. are provided
(4) Follow-Up Notes (15%)	0	1	2	3	4+
(5) Follow-Up Duration (15%)	None required.	<5 days	5-10 days	11-20 days	>20 days

3.4 WRI Grading

(Created May 12, 2022)

A Verifier can earn an A, B, C, D, or F grade for a WRI verification based on accuracy and completeness.

Verifier grades are available for review in the AXIS portal.

Verifiers can appeal a WRI grade using the process above in Section 3.3.

Stand-Alone WRI Grading Rubric

VERIFICATION GRADES	A	B	C	D	F
1) WRI Calculator Tool (33%) WRI Tool is the current available on Dropbox	Current version is used.		Tool is outdated by <1 year.		Tool is outdated by >1 year.
2) Complete & Appropriate Documentation (33%) Tool is complete, and information appears reasonable based on project details. If also pursuing WaterSense, checklist is also uploaded.	No issues		1-2 issues identified		3+ issues identified
3) Photo (33%) Front elevation photo is included. Photos are clear and appropriate/size/resolution for Reviewer to see building and adjacent landscaping.	Good	Adequate	Fair	Poor	Missing
4) Follow-Up Notes (Nominal Consideration)	0	1	2	3	4
5) Follow-up Duration (Nominal Consideration)	None required	<5 days	5-10 days	11-20 days	>20 days
6) Failure to Address a Recommendation Across Numerous Reports (Nominal Consideration)	Good Response		Limited		No Response

3.5 Virtual Inspection Protocol

(Created March 24, 2020; Updated April 15, 2020; Updated December 17, 2021; Updated April 2022)

Intent: The virtual inspection process is available for Verifiers to confirm NGBS compliance remotely via video conferencing services under extraordinary circumstances beyond their control. Virtual inspection is intended to be used as a last resort when NGBS Green procedures cannot otherwise be followed. It is likely that a virtual inspection process may take more time and effort than an in-person inspection, which is why it should only be used as a last resort when in-person inspection is not possible.

Scope: This protocol can be used for the rough and/or final inspection for single-family homes and multifamily buildings.

The protocol applies to NGBS practices where visual inspection is stipulated, per the **VRG**.

Practices requiring measurements and testing must still be verified on-site. Estimates and predictions cannot be used. If the Verifier cannot complete the testing, they should work with the builder to identify a qualified professional who can perform the necessary tests. Please note that Home Innovation does not accept use of default testing values for any Energy Efficiency compliance pathway, including the Alternative Bronze and HERS Index Target paths.

Project Eligibility: An emergency/extraordinary situation is one where preparation and planning would not have foreseen the inability to get to a jobsite to complete the on-site inspection. This includes but is not limited to, flight cancellations, travel restrictions, illness, last-minute notification of inspection window and lack of local accredited verifiers in project location.

Conditioned multi-unit or multi-building projects (multifamily and townhome communities) must have at least one on-site inspection. Verifiers should make every effort to conduct the first inspection in-person.

For multi-unit and multi-building projects, virtual inspection may not be used for more than 30% of the total inspection visits. For continued use of virtual inspection beyond 30% of the total expected visits for the building(s), the Verifier must submit an email request to Home Innovation staff and detail the extenuating circumstances that prevent them from performing the inspection themselves or hiring a local Verifier or Field Rep.

Verifiers should keep records regarding their application of virtual inspection and submit to random desktop audits upon request. Abuse of this protocol may result in verifier probation or, in severe cases, a prohibition on use of the virtual inspection protocol.

Exception: Rural Communities: Rural communities often stand to benefit the most from energy efficiency and green building programs due to their less efficient existing building stock and resource-strained populations.

At the same time, on-site inspections in less populated areas can require extensive travel and overnight stays. This can make the provision of green verification services cost-prohibitive.

To better accommodate NGBS Green Certification activity in rural areas, we allow Verifiers to appeal for the use of the Virtual Inspection Protocol in non-emergency scenarios. Verifiers should contact the NGBS Green team with the following information: (1) explanation of project constraints; (2) confirmation that there are few or no viable green professionals within 150 miles of the project site

available to serve the project located; and (3) proposed plan for executing a combination of on-site and virtual inspections, including the expected percentage of site inspections that will be conducted virtually. Approval will be granted on a case-by-case basis.

Notification: Verifier must notify the client in writing that a remote inspection will be done in lieu of an on-site inspection.

On-Site Videographer: The on-site videographer should be generally familiar with construction practices and systems, and specifically familiar with the building(s) seeking certification.

A HERS Rater or Rating Field Inspector (RFI) is an ideal videographer to do the remote inspection; however, the Verifier must still supervise the remote inspection. Alternatively, a HERS Rater or RFI can inspect the building for those practices that a NGBS Green Field Rep. can inspect for if their inspection is accompanied with photo documentation and submitted to the verifier (see below for more details).

In implementing this protocol, a project's "verifier of record" cannot relinquish or transfer their responsibility for confirming a building's compliance with the NGBS. The on-site videographer and any verification professionals serve to collect and share information with the verifier of record, who ultimately submits the project to Home Innovation for review.

Insurance Requirements: If the videographer is not an employee of the General Contractor or the builder/developer, the Verifier must ensure that that person is sufficiently insured to meet Home Innovation's insurance requirements for verifiers. As an option, if using a HERS Rater or RFI, the Verifier can add the HERS Rater as a covered party to their professional liability and automobile insurance coverage.

Inspection Options: Confirmation of practices by virtual inspection can be performed remotely by using either online or offline video inspection. Online video inspection must be attempted first. Offline video inspection is an option only when an online video inspection is impossible for reasons, such as lack of connectivity. At this time, we will not allow phone/audio-only remote inspections. We believe there is value in the Verifier being able to visually confirm compliance for the practices.

Live Video Inspection: We prefer live video inspections to recorded inspections, but, as discussed below, we realize that connectivity may preclude that option. This inspection process utilizes a live video application, including but not limited to, Zoom, Microsoft Teams, or Skype.

The live video stream must include the Verifier and the on-site videographer. Home Innovation may request to participate during the live stream or ask the Verifier to record the remote inspection and share the recorded video file for QA purposes.

Offline Inspection: When there are limitations to an online remote inspection, such as internet/network connection issues, the on-site videographer can capture an offline video recording of the entire inspection. The Verifier would guide the on-site videographer on how the process should be performed in advance of the inspection.

Preparation:

- 1) Ideally, before starting virtual inspection on a multi-unit or multi-building project, at least one in-person inspection is conducted.

- 2) Coordinate with the builder:
 - a. Select an inspection date.
 - b. Identify On-Site Videographer.
 - c. Send the completed project Scoring Tool or custom checklist of items to be verified to the on-site videographer in advance of the inspection.
- 3) Obtain the needed technology.
 - a. *For both parties:*
 - i. Phone or tablet with microphone, necessary file storage, and installed video calling application(s)
 - ii. Access to Dropbox, Google Drive, or other file-sharing service to exchange recorded video files after the call
 - b. *For on-site videographer:*
 - i. NGBS Green Scoring Tool or custom checklist of items to be verified during that visit
- 4) Test device functionality:
 - a. Test the Internet signal strength (for live stream inspections).
 - b. Test the battery life.
 - c. Test the sound, mic and video quality.

Inspection Process:

1. Note the date and start time on the verification report (and for the video, if recording).
2. The videographer should confirm his/her name and title.
3. The on-site videographer should take a front elevation photo to send to the Verifier to submit with the verification report.
4. The live video must start from the front elevation of the building.
5. The Verifier should establish that the on-site videographer is at the correct location by having the videographer repeat the project address.
6. If live video, the Verifier will verbally guide the on-site videographer during the entire live video on how the process should be performed. For offline, the videographer would be guided by the NGBS Green Scoring Tool and any notes provided by the Verifier in advance of the inspection.
7. The Verifier and videographer should work through the verification report top-to-bottom.
8. Apart from minor internet connection issues, there shall not be any pausing or stopping of the recording during the live stream. If the video needs to be restarted for any reason the videographer should start again by repeating the project address, stating the date and time, and the location in the building where they are restarting (i.e. 4th floor, Unit 4A).
9. The video must clearly show the details needed for confirmation of all the necessary NGBS practices.
10. All NGBS practices that are typically verified at that inspection stage (i.e., rough or final) must be completely confirmed before points can be awarded on the verification report.
11. If there are any compliance issues revealed in the video inspection that cannot be corrected during the remote inspection, the Verifier should immediately send an email to the client notifying them of the issue and recommending corrections as needed.
12. Record the ending time for the inspection.

13. For an offline inspection, once the inspection is completed, the videographer must send to the Verifier the completed and signed verification report, the video file, the elevation photo, and a signed Signature Page. Video files can be transferred to Home Innovation using any commonly-accepted file-sharing platform, including but not limited to Dropbox, Google Drive, and Microsoft OneDrive.
14. The Verifier should note on the summary page that the inspection was conducted via virtual inspection protocol and include the name and title the on-site videographer.
15. For all offline inspections, the Verifier should retain the video file for a minimum of 3 years and be able to produce the file for Home Innovation if requested during a QA audit.
16. If this is the only (for single-family) or last rough/final inspection (for multifamily), the Verifier should email a pdf copy of the verification report to the client and then upload to AXIS. per the **VRG** when complete.

Sampling: Where sampling is being performed per the NGBS Green Alternative Multifamily Verification Protocol, the Verifier should identify the units to be sampled among those available. This will require coordination between the builder and Verifier in advance of the inspection.

During the inspection, the on-site videographer should clearly capture evidence of which units were reviewed.

Inspection Issues: If at any point during the online remote inspection or review of the offline video recording, the Verifier believes that the video quality or another aspect is not satisfactory, the Verifier can either reschedule a live online inspection, conduct an offline remote inspection, or, if able, go on-site and conduct a complete inspection.

3.6 Virtual Audit Protocol

(Created 08/21/2020; Revised 5/4/2021; Revised 11/15/2021; Revised 4/29/2022, Revised 3/3/2023)

Intent: The virtual audit is one method of audit that is used by Home Innovation to assess an accredited NGBS Green Verifier's understanding of technical building practices, as well as program policies and protocols.

Selection & Process: Home Innovation seeks to conduct virtual audits on 50 unique Verifiers each year. Verifier selection is largely random but can be influenced by a Verifier's probation status, performance, and Master Verifier credential.

Verifier audits can be conducted at either single-family homes and multifamily projects. For multifamily buildings that require multiple visits, the virtual audit shall be conducted on just one of the visits. The best available date will be selected by Home Innovation staff and the verifier.

Scheduling: Audits are conducted at either rough or final.

A Verifier receives an AXIS notification that identifies that they have been selected for a Virtual Audit and must coordinate with Home Innovation to schedule an audit during their next in-field inspection. The AXIS Scheduling dashboard (located under the 'Tasks' dropdown) will be used to coordinate the audit's date/time, address of the project to be audited, and video communication platform that will be used. A precise time does not need to be identified; when possible, Home Innovation's reviewer will

make themselves available for a block of time (e.g., morning or afternoon) to accommodate and be reachable by phone when the Verifier is ready to begin the inspection.

We recognize that there is often a tight (often 24-hour turnaround or less) for inspection scheduling. Our reviewers will also be available and responsive throughout the scheduling process. Verifiers will not receive lower grades based on scheduling issues. Beyond scheduling, the preparation required for a virtual audit is minimal and not unreasonable to accomplish with a tight timeline.

Once a date/time has been established, a Virtual Audit QA Module will be set-up for the selected project.

Prior to the virtual audit, the verifier should upload the NGBS Green Scoring Tool for the selected project and any specific notes about the items that will be reviewed during the inspection to the Virtual Audit QA Module.

Within five business days following the virtual audit, Home Innovation's Reviewer and the verifier will debrief the virtual audit and discuss feedback and recommendations by phone or video conference.

Time Commitment: Virtual audits will be limited to 2 hours to limit time investment and battery life. For multifamily, a portion of units available for inspection will be pre-selected for audit.

Team Verification: While we recognize that, in many instances, multiple NGBS Green Verifiers will work cooperatively to provide verification services, we do not allow the Virtual Audit request to be transferred to another individual on the verification team.

The verifier observed during the virtual audit does not need to be the "verifier of record" for the project.

On-site Videographer (Optional): An on-site videographer might assist with capturing live video during the virtual audit. The videographer acts as a helper but does not participate in verifying NGBS practices. Please inform Home Innovation prior to the virtual audit if an on-site videographer will be present and include the name and job title on the Signature Page.

Insurance Requirements: If the videographer is not an employee of the General Contractor or the builder/developer, the Verifier must ensure that that person is sufficiently insured to meet Home Innovation's insurance requirements for verifiers. As an option, if using a HERS Rater or RFI, the Verifier can add the HERS Rater as a covered party to their professional liability and automobile insurance coverage.

Auditing Options: Confirmation of practices during the virtual audit can be performed remotely by using either online or offline method. Online video must be attempted first. The offline video method is an option only when the online video method is impossible for reasons, such as lack of connectivity.

Online Live Video Audit: This inspection process utilizes a live video application, including but not limited to Zoom, FaceTime, Google Meet, Microsoft Teams, or Skype. The live video stream must include the Verifier and the on-site videographer (if any).

Offline Audit: When there are limitations to a live video audit such as internet/network connection issues, the Verifier can capture an offline video recording of the entire inspection and submit the video files to Home Innovation within 2 business days. If offline video quality is deemed too poor for a proper evaluation, Home Innovation may schedule another audit of another upcoming inspection by the same verifier.

Preparation:

- 1) Coordinate with Home Innovation Reviewer:
 - a. Confirm date and time.
 - b. Identify video call platform that will be used.
 - c. Identify the On-Site Videographer if any.
 - d. Upload the completed project Scoring Tool and/or other inspection checklist to Home Innovation and the on-site videographer (if any) to AXIS in advance of the Virtual Audit. If using a custom mobile application, consider sending screenshots of the verification screen(s).
 - e. If multifamily, identify which units are expected to be available for inspection. Home Innovation will respond to request a selected number of units (e.g., 5 units total units across floors 3 and 6) that will be audited.
 - f. As a best practice, we recommend informing the Site Superintendent that video will be recorded during the Audit.
- 2) Obtain the needed technology.
 - a. Phone or tablet with microphone, necessary file storage, and installed video calling application(s).
 - b. Access to Dropbox, Google Drive, or other file-sharing service to exchange recorded video files after the call.
 - c. All Testing tools and equipment needed to verify compliance with NGBS Practices.
- 3) Test device functionality on your own:
 - a. Test the Internet signal strength (for live stream inspections).
 - b. Test the battery life.
 - c. Test the sound, mic, and video quality.

Inspection Process:

There are two main approaches for the virtual audit:

- (1) *“Walk-Back”* – verifier sets up all testing equipment and conducts initial testing and visual inspection prior to launching the video call with Home Innovation. On the call, the verifier will show and describe their approach for setting up the dwelling unit and equipment and then demonstrate testing and visual inspection.
- (2) *Live* – all inspection steps, including set-up equipment, are conducted live during the video call with Home Innovation.

Regardless of approach, the following steps must be addressed:

1. Connect with Home Innovation’s reviewer on the specified video chat platform.
2. The Verifier should establish that he/she is at the correct location by repeating the project address and identifying his/her name, date, and time. The Verifier should take a selfie with the building in the background and then pan to show the front elevation and surrounding lot.

3. The Verifier and videographer (if any) should work through the verification report, addressing all items scheduled for inspection during that visit. All NGBS practices that are typically verified must be completely confirmed before points can be awarded on the verification report.
4. Apart from minor internet connection issues, there shall not be any pausing or stopping of the recording during the live stream. If the video needs to be restarted for any reason the Verifier should start again by repeating the project address, stating the date and time, and the location in the building where they are restarting (i.e., 4th floor, Unit 4A).
5. The video must clearly show the details needed for confirmation of all the necessary NGBS practices. The Verifier should narrate the inspection, indicating their location (e.g., unit number, floor number, room within unit, etc.) and demonstrating their understanding of the practices and expected verification steps.
6. If there are any compliance issues revealed in the video inspection that cannot be corrected during the remote inspection, the Verifier should immediately send an email to the client notifying them of the issue and recommending corrections as needed.
7. For an offline inspection, once the inspection is completed, the Verifier must upload the completed and signed verification report, the video file, and the front elevation photo to AXIS. *(If live video inspection, review materials can be held and uploaded during normal sequence).*

Assessing Virtual Audit Performance

The credibility and integrity of the NGBS Green program relies on the performance of Home Innovation's independent agents in the field. NGBS Green Verifiers are expected to fully comply with the Verifier's Resource Guide regarding inspection of projects seeking certification and completion of verification reports. NGBS Green Verifiers are also evaluated for their investment in competence and accuracy during the inspection.

Each virtual audit process provides the Home Innovation review team a snapshot of a verifier's:

- Understanding of the NGBS practices and compliance requirements
- Adherence to the verification protocol and certification process outlined in the Verifier's Resource Guide
- Attention to detail

Grading

Home Innovation reviewers assess the virtual audit according to the rubric below.

A verifier can earn an A, B, C, D, or F grade for a given Audit based on the preparation process, inspection process, testing, visual inspection process, and knowledge of practice. Projects seeking higher levels of certification (i.e., Gold or Emerald) will be reviewed and graded with greater stringency.

Verifiers are expected to interpret, discuss, and know the NGBS. A demonstrated misunderstanding of the NGBS practices during the virtual audit will result in lower grades.

If Home Innovation staff observes a significant departure from program policies during the audit, such as inappropriate application of sampling, the Verifier may be placed on immediate probation, regardless of the Verifier's overall performance.

Verifier earning a C, D, or F grade would be deemed unsatisfactory and would be audited again during the next inspection. This could be the next inspection of the same building/project or another project, depending on scheduling.

Verifier Company Admins can view grades for all accredited verifiers employed by their organization.

Virtual Audit Grading System & Rubric

CATEGORY	A	B	C	D	F
Preparation Process <i>Verifier is prepared for the virtual audit using the guidelines above.</i>	No deviations from protocol		1-2 deviations from protocol		3+ deviations from protocol
Adherence to Virtual Audit Protocol <i>Verifier conducts the audit as outlined above.</i>	No deviations from protocol		1-2 deviations from protocol		3+ deviations from protocol
Testing <i>Verifier performs testing competently and according to the EE Testing Policy. Preparation, set-up, procedure, and analysis are evaluated. Variance in site-collected data should be acceptable per test standards.</i>	0 errors that impact Test Results		1-2 deviations from protocol		3+ errors that impact test results
Verification Competency <i>Verifier demonstrates complete understanding of the NGBS practices, verification requirements, and program policies.</i> <i>*A demonstrated failure to verify mandatory practice(s) can result in a lower grade in this category.</i>	Excellent		Average*		Below Average*
Scoring Tool <i>The Scoring Tool or custom checklist used during the Virtual Audit is accurate, current, and complete.</i>	Errors < 5 claimed points	Errors from 5-10 claimed points	Errors from 11-20 claimed points	Errors from 21-30 claimed points	Errors from 21-30 claimed points

Each grading category is weighted as described below:

VIRTUAL AUDIT WEIGHT: TESTING CONDUCTED	
Category	Weight
Preparation Process	15%
Adherence to Virtual Audit Protocol	15%
Testing	25%
Verification Competency	30%
Scoring Tool	15%

In a scenario where the Verifier is not qualified to perform the necessary testing or is not testing based on selected compliance path, the grading categories would be weighted as described below:

VIRTUAL AUDIT WEIGHT: NO TESTING	
Category	Weight
Preparation Process	20%
Adherence to Virtual Audit Protocol	20%
Verification Competency	40%
Scoring Tool	20%

3.7 Verifier Candidate Mentoring Policy

(Effective August 2017)

Home Innovation requires NGBS Green Verifier Candidates to have previous experience and/or training in residential construction and green building before accessing the Verifier training. Specific requirements are detailed in the [NGBS Green Verifier Candidate Handbook](#).

Some Verifier companies have robust internal training programs where Verifier candidates can train alongside experienced Accredited Verifiers. In this case, onsite verification training with an experienced Verifier mentor can be as good, if not better, than unrelated experience and training.

A Verifier Candidate can access the NGBS Green certification training and test without meeting the pre-requisites, provided that the Verifier Candidate is employed by a company with at least 2 Accredited NGBS Green Verifiers in good standing and the Verifier Company has an approved internal training protocol specific to NGBS Green verification that includes a field training component. At least one of the Accredited Verifiers at the company must have been accredited for at least 2 years and been actively verifying projects during that time.

How to Apply

Verifier companies that wish to take advantage of this program should submit a written request to gbverifications@homeinnovation.com. The request should include a copy of the internal training that meets the minimum requirements below. Please be as specific as possible in the written request if it is not apparent how the internal training meets Home Innovation's requirements. Please include an explanation of how Home Innovation will know a Verifier Candidate has successfully completed the internal training (i.e., certificate, or email) and who will submit the documentation to Home Innovation (the Verifier Candidate may not be the one to submit proof of completing the internal training). Home Innovation will not accredit any Verifier Candidates without meeting these requirements.

Verifier Mentoring Program

Verifier organizations that meet the following criteria may apply to have their staff access the NGBS Green Verifier training and testing if that individual is concurrently in an internal training program working with experienced Accredited Verifiers. Verifier candidates can access NGBS Green verification training as they complete the internal training and even take the Verifier accreditation test. However, Home Innovation will withhold the Verifier candidate's accreditation until the internal training is successfully completed.

Internal Verification Training

At a minimum, the company's internal training must include an opportunity to attend and observe in-person an Accredited Verifier performing a variety of rough and final inspections. The observation should include specific verification instruction from the supervising Accredited Verifier. During the mentoring period, the Verifier Candidate must observe a diversity of verification inspections that reflects the typical inspections performed by the Company's Verifiers. For example, if a Verifier Company performs inspections on single-family homes, garden style apartments, and mid-rise multifamily buildings, the Verifier Candidate should have an opportunity to observe an equally diverse number of inspections. Verifier candidates that work for an organization solely focused on single-family homes will base their training and observation on such homes; however, it is highly desirable if possible, for the Verifier candidate to be exposed to a variety of project types and building science issues.

During the training and mentoring period, the Verifier Candidate is prohibited from performing an NGBS Green verification inspection solo. Further, while the Verifier Candidate may assist in the preparation of the documentation and inspection report, an Accredited Verifier must review the submission as well as sign the report as the Verifier of Record. The Verifier of Record is solely responsible for complying with NGBS Green process and policy, must respond to any questions or corrections from the Home Innovation green report reviewer, will manage the process and documentation collection should the project be selected for a Desktop Audit, and for any errors and/or omissions on the verification package submission. The verification report submission will be graded, and any the corresponding grade accrues to the Verifier of Record.

When the Verifier candidate has successfully completed the internal training, the Verifier Company must submit to Home Innovation written documentation that internal training is complete and the Verifier candidate has passed the internal assessment to determine competency. No specific documentation for completion is required, but at a minimum it should indicate the name of the Verifier candidate and the date s/he completed the training and competency assessment.

Minimum Internal Training Requirements

- Opportunity to register a project under supervision of Accredited Verifier and to be submitted by Accredited Verifier (see Verifier Mentor requirements above)
- At least 6 opportunities to review plans for buildings seeking NGBS Green certification and using plans, score the building using the NGBS Green Scoring Tool
- In-field mentoring on preparation of both rough and final reports
- Opportunity to complete rough and final verification report under supervision of Accredited Verifier and to be submitted by Accredited Verifier (see Verifier Mentor requirements above)
- Assist with documentation collection and review
- In-field training and/or classroom training on at least two of the following subjects:
 - Sustainable land development practices
 - Resource efficient construction
 - Indoor air quality
 - Water efficient practices

Supplemental Green Building Training

Verifier candidates often have enough training in energy efficiency practices, but insufficient green building practices and training to meet the Verifier Candidate prerequisites. In these cases, the Verifier training should address this deficiency either through internal training or supplemental external training. Further, field training should focus on non-energy practices to ensure the Verifier candidate understands the intent of the practice, how to determine successful implementation, and proper NGBS Green verification.

Probationary Period

Verifiers that attain accreditation via the mentoring process will be placed on a 1-year probation like all NGBS Green Accredited Verifiers. (See Policy 3.3 Verifier Performance) The probation period may be extended by Home Innovation should the Verifier exhibit performance issues or not remain in good standing as discussed in the VRG.

3.8 Stay Informed

(Effective June 2011; Revised April 2016)

NGBS Green Verifiers must keep Home Innovation informed of their current contact information including primary email, phone number, and mailing address. Verifiers must also ensure their email service will accept email from the @homeinnovation.com domain. Home Innovation's primary means of communicating critical, often time-sensitive, program news, developments, and changes to verifiers is the monthly *Verifier Update* e-newsletter (VU), which is sent to the primary email address of every accredited Verifier. Each newsletter is archived in the [Verifier-Only Resource Center](#). Failure to keep up with these monthly communications may result in verifiers missing key program deadlines, thereby jeopardizing the successful certification of their clients' projects. In short, Home Innovation expects verifiers to read the VU.

3.9 Anti-Trust Statement

(Effective November 2014)

Home Innovation's policy is to comply fully with all laws, including federal and state antitrust laws. Compliance with the letter and spirit of the antitrust laws is an important goal of Home Innovation Labs and is essential to maintaining our corporate reputation for the highest standards of ethical conduct. NGBS Green Verifiers must fully support this antitrust mandate, as it is critical to Home Innovation Labs continued success not only for the NGBS Green certification program but for all our business.

Verifiers who are found to be working in cooperation to allocate or divide service markets or otherwise discourage competition will be terminated. Verifiers terminated for this reason may not reapply for a period of one year. Upon re-application, acceptance is at the discretion of Home Innovation.

3.10 Architects as NGBS Green Verifiers

(Effective April 11, 2014; Revised February 25, 2016; Revised March 2019)

Home Innovation recognizes that architects may see value in obtaining NGBS Green Verifier accreditation and guiding existing clients through the certification process.

To ensure that verifiers serve as independent, third-party inspectors for NGBS compliance, verifiers cannot be engaged to provide construction contract administration. While AIA Document A201™-2007 **General Conditions of the Contract for Construction** indicates that architects do not have the "authority to act on behalf of the Owner" nor "have control over, charge of, or responsibility for the construction means, methods, techniques, sequences or procedures," Home Innovation recognizes that architects involved in construction phase services have a greater professional and financial stake in the project's construction to the NGBS and may not provide a fair, independent assessment of the home/building features.

Architects who are retained to provide design services, but do not provide construction phase services, are permitted to serve as Verifiers on projects they design. Conducting the rough and final inspections of a project as the architect is not considered construction oversight; however, a higher level of involvement in the construction process beyond verification of the NGBS practices would constitute oversight and a conflict of interest. Architects who provide both design and construction phase services are not permitted to verify those projects. Similarly, architects who are employed by a design-build firm are ineligible to verify projects that are built by the firm.

A verifier employed by an architectural firm may verify a project that another employee in the firm is involved with the construction oversight provided the verifier does not report to the staff managing the construction process.

Verifiers are expected to disclose any potential conflicts of interest, or the appearance of a conflict of interest, to clients before signing a contract to provide verification services. If the potential conflict, or appearance of a conflict of interest, is not known at the time a verification services contract is signed, the verifier is expected to notify the client as soon as the issue arises.

Verifiers must disclose services provided by their company on the NGBS Green Verification Report, including design services. Verifiers must provide thorough and accurate information for every project. In a situation where the verifier's company is also providing construction oversight, the details of this arrangement need to be clearly disclosed. Failure to properly disclose services provided to a client may result in a suspension of verifier accreditation. If a Verifier is ever presented with a situation where it is unclear if the situation would be acceptable to Home Innovation, the Verifier should seek prior approval from Home Innovation before committing to provide and/or providing verification services.

3.11 Cooperating with Competing Programs (Effective October 15, 2013) (Effective October 15, 2013)

Home Innovation copyrighted and/or trademarked materials may not be used in connection with a local program or requirement unless the project is seeking NGBS Green certification from Home Innovation.

A growing number of state and local jurisdictions are requiring NGBS compliance. Some jurisdictions accept Home Innovation NGBS Green certification to demonstrate this compliance. Others do not mandate certification but instead accept Home Innovation scoring tools as compliance documentation. These jurisdictions may allow a builder to self-score a project on the NGBS Green Scoring Tool. Alternatively, the jurisdiction may require a Home Innovation-accredited NGBS Green Verifier, or even a Certified Green Professional (CGP), to verify compliance.

Several HBAs also offer their own green building certification programs, either based on the NGBS. Some employ their own set of verifiers/raters; others do not. Like the jurisdictions noted above, some HBAs may even specify use of the NGBS Green Scoring Tool to demonstrate compliance with their programs.

Home Innovation's tools and resources developed for NGBS Green certification are copyright protected for the sole use of those seeking certification through Home Innovation Labs. Verifiers are prohibited from using these materials for any other purpose. Verifiers are also prohibited from providing verification or certification services to clients using the NGBS if the project is not seeking Home Innovation certification. Verifiers are expected to notify Home Innovation of any instance where Home Innovation materials are being used improperly.

Services that violate the NGBS Green Verifier agreement include, but are not limited to:

- Providing verification services to a builder to comply with the NGBS for local code compliance, when that project is not seeking Home Innovation Certification
- Submitting Home Innovation NGBS Green materials of any kind to a government agency for a project that will not be certified by Home Innovation

- Serving as a verifier for another NGBS-based green building certification program
- Sharing Home Innovation verification materials (e.g., Verifier’s Resource Guide, agreement forms, study materials, etc.)

Verifiers in violation of their agreements with Home Innovation will be terminated immediately.

3.12 Service Disclosure

(Effective October 2008, Revised July 2023)

Any services provided to a client by an NGBS Green Verifier, aside from verification services, must be disclosed by including a note in any relevant inspection report. Services requiring disclosure include, but are not limited to: consulting, architectural services, design support, HERS or other energy ratings, and serving as a verifier/rater for another non-NGBS-based green program (e.g., ENERGY STAR) on that building. Disclosure of these services is critical to ensure Verifiers are not involved in potentially conflicting activities.

Verifiers must disclose potential conflicts of interest, or the appearance of a conflict of interest, to clients before signing a contract to provide verification services. If the potential conflict, or appearance of a conflict of interest, is not known at the time a verification services contract is signed, the verifier is expected to notify the client as soon as the issue arises.

Verifiers must disclose services provided by their company in the NGBS Green Verification Report. Verifiers must provide thorough and accurate information for every project. Failure to properly disclose services provided to a client may result in a suspension of verifier accreditation. If a Verifier is ever presented with a situation where it is unclear if the situation would be acceptable to Home Innovation, the Verifier should seek prior approval from Home Innovation before committing to provide and/or providing verification services.

Please note, this process does not absolve a Verifier from the conflicts of interest prohibitions under the Verifier Termination Policy.

3.13 Insurance

(Revised February 2013)

NGBS Green Verifiers are required to maintain minimum insurance coverage (below) for their accreditation. Verifiers are required to submit evidence of their insurance coverage to Home Innovation annually. Failure to demonstrate insurance coverage will result in termination.

“Home Innovation Research Labs” must be listed as the additionally insured.

Minimum required coverage is as follows:

General Liability	\$1,000,000
Automobile Liability	\$500,000
Workers Compensation	As required by law
Employer’s Liability (typically part of Workers Compensation)	\$500,000
Professional Liability	\$500,000

Covers professional for negligence, errors, and omissions that injure clients.
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3.14 Use of Materials

(Revised September 2013)

i. **Copyright Protection of NGBS Green Scoring Documents**

The **Verifier's Resource Guide** and the NGBS Green Scoring Tool are protected by United States copyright law. Home Innovation authorizes the use of these materials only to individuals participating in Home Innovation's NGBS Green certification program. No part of these materials may be reproduced in any form or used without Home Innovation's prior written consent.

The NGBS Green Scoring Tool spreadsheet has been locked/protected to prevent changes that would affect the logic of the tool. NGBS Green Verifiers should not attempt to alter the format or logic of the spreadsheet. The NGBS Green Scoring Tool is a copyrighted work, and the embedded code is proprietary property of Home Innovation. Unprotecting this document is a violation of copyright law that may result in termination and/or legal action, as outlined in Paragraph 4.6 of the Verifier Agreement.

ii. **Proper Program References** (Revised February 2013)

NGBS Green Verifiers are expected to read and adhere to NGBS Green Partner Brand & Marketing Style Guide, downloadable at www.homeinnovation.com/marketgreencertified.

Referring to the NGBS Green certification program as "NAHB Green" or similar is technically inaccurate and misrepresents the program, as the certification program is managed by Home Innovation Research Labs, not the National Association of Home Builders (NAHB).

"Home Innovation Labs" and "Home Innovation" are acceptable alternative references for Home Innovation Research Labs. The company is not identified by an acronym.

APPENDIX D:
NGBS Green Multifamily Project Information To Be Collected



NGBS Green Multifamily Project Information

(Off-line Planning Document)

Registration for multifamily projects will require the following information. Providing the information to the Verifier before s/he registers the project can streamline registration. If the information is not initially completed by the Verifier at registration, the project information can be completed or revised on the AXIS portal.

BASIC PROJECT INFORMATION

Verifier Name: _____

Verifier Organization: _____

Standard Selected: _____

Scoring Path Selected: _____

Anticipated Certification Level: _____

Project Name: _____

Project Description (255 characters or less)

[this should be a consumer-oriented marketing description as it will be used on NGBS.com]:

City: _____ State: _____ ZIP Code: _____

County: _____

Accessory Structure: (Yes/No) _____ Accessory Structure Certified: (Yes/No) _____

Accessory Structure Address: _____

Accessory Description: _____

Estimated Completion Month: _____ Estimated Completion Year: _____

Website: _____

RESPONSIBLE FOR APPLICATION PACKET

Role: (Builder/Developer/Architect/Owner) _____

Contact Name: _____

Contact Email: _____

NAME(S) ON CERTIFICATE

Party on Certificate: (Builder/Developer/Architect/Owner) _____

Community Name on Certificate? (Yes/No) _____

PROJECT TYPE & FINANCING INFORMATION

Building(s) will include non-residential space (retail/commercial)? (Yes/No) _____

Non-residential space to be included in certification? (Yes/No) _____

Seeking HUD Mortgage Insurance Premium Reduction? (Yes/No) _____

Seeking Fannie Mae Green financing? (Yes/No) _____

Seeking Freddie Mac Green financing? (Yes/No) _____

Intended to be affordable housing? (Yes/No) _____

BUILDER/GENERAL CONTRACTOR INFORMATION

Builder Name: _____

Contact First Name: _____ **Last Name:** _____

Email: _____ **Phone:** _____

DEVELOPER INFORMATION

Developer Name: _____

Address: _____

City: _____ State: _____ ZIP Code: _____

Website: _____

Contact First Name: _____ Last Name: _____

Email: _____ Phone: _____

OWNER INFORMATION

Owner Name: _____

Address: _____

City: _____ State: _____ ZIP Code: _____

Website: _____

Contact First Name: _____ Last Name: _____

Email: _____ Phone: _____

ARCHITECT INFORMATION

Architect Name: _____

Address: _____

City: _____ State: _____ ZIP Code: _____

Website: _____

Contact First Name: _____ Last Name: _____

Email: _____ Phone: _____

MARKETING INFORMATION

Contact First Name: _____ Last Name: _____

Email: _____ Phone: _____

SALES/LEASING INFORMATION

Sales/Leasing Email: _____ Phone: _____

Website: _____

BILLING INFORMATION

Entity Responsible for payment: _____

Contact First Name: _____ Last Name: _____

Email: _____ Phone: _____

BUILDING(S) INFORMATION

of Buildings: _____

Building Info:

- Building #1 Address: _____
- Building # 1 Unit Count: _____
- Building #1 Story Count: _____
- Commercial Space: Seeking Core & Shell | Seeking Full Fit-Out | Not Seeking Certification
- NGBS Green+ Badges (Available for 2020 Projects):
 - Wellness
 - Net Zero Energy
 - Zero Water
 - Smart Home
 - Resilience
 - Universal Design

[collect information for as many buildings as there are in the project]

APPENDIX E:
NGBS Green Certification Client Application (Sample)



NGBS GREEN / WRI / WaterSense CERTIFICATION CLIENT AGREEMENT

This Agreement ("Agreement") is made and entered into by and between Home Innovation Research Labs, Inc. ("the Company"), a Maryland corporation with an office at 400 Prince George's Boulevard, Upper Marlboro, MD 20774, and

("Client") having its principal place of business at:

regarding Client's participation in the NGBS Green Certification Program ("NGBS Green"), WRI Certification, or WaterSense.

WHEREAS, the Company is authorized to certify compliance with the *National Green Building Standard*® ("NGBS") and WaterSense Labeled Homes.

NOW THEREFORE, the parties agree:

1. Client's Project(s) will be certified as meeting the applicable criteria of NGBS Green, the NGBS Water Rating Index (WRI), or WaterSense, available at www.HomeInnovation.com/green, in the sole discretion of the Company, in accordance with the terms of this Agreement. "Project" can be a single-family home, a multifamily building, a mixed-use building, or a land development. Client acknowledges and agrees that certification applies to Projects and not to Client's business or employees.
2. Client will use NGBS Green and WaterSense scoring tools available at www.HomeInnovation.com/GreenScoring to specify the NGBS Green features and/or water conserving features Client plans to incorporate into each Project seeking certification.
3. Projects seeking certification will be constructed in compliance with the relevant conformance criteria for the specific certification Project is seeking.
4. The Company will issue a certificate for each Project certified as meeting the relevant program criteria. The form and content of the certificate may be modified at the Company's discretion. The Company agrees that the name of the Project Owner on the certificate can be changed for an administrative fee.
5. Client will hire an NGBS Green Verifier ("Verifier") or Accredited WRI Verifier depending on the certification Project is seeking. Verifiers are accredited by the Company

to inspect each Project seeking certification and to verify the Project has incorporated the relevant practices claimed toward certification. Verifier must be accredited with the appropriate credentials to the correct certification version by the Company at the time of each inspection. Accredited Verifiers are listed at

www.HomeInnovation.com/FindNGBSVerifier. Client agrees that fees for verification services are not paid to or by the Company and are not set by the Company or NGBS Green but rather are determined between Client and Verifier. Client warrants that payment or amount of the fee is not dependent on the results of Verifier's inspection.

6. Client will schedule with Verifier the necessary inspections for each Project seeking certification. Client agrees to provide Verifier with access to each Project, the relevant scoring information, and the necessary documentation that supports the certification.
7. Client will maintain records and supporting documentation for a period of three (3) years.
8. Verifier will inspect the Project and review relevant documents according to the relevant certification protocol. Verifier will prepare a verification report in the provided format.
9. Client will pay certification fees to the Company (independent of verification fees paid to Verifier) per the certification fee schedule that is current at the time of the Project's registration.
10. Client's Project will not achieve certification until and unless the Company reviews the verification report and makes a final certification determination.
11. The Company will promptly issue a certificate upon receipt and review of the verification report documenting compliance with conformance criteria and upon the Company's determination, in its sole discretion, that the conformance requirements have been met; provided Client is in compliance with this Agreement, and the appropriate fees have been paid.
12. Client's participation in NGBS Green, WRI, or WaterSense and the location of certified Projects will be made public. The Company shall list the Project on the Company's website(s) and may make public basic Project information including, but not limited to, the address and certification level.
13. The Company may request timely access to the Project(s) and supporting documentation for quality control over the compliance process. Quality control

activities involve periodic spot checks of the verification inspection and documentation review process to ensure accuracy and consistency.

14. Should any Project be found not to have originally (as built) met the criteria for certification, the certification will be revoked or revised, as appropriate, and the new certification status will be communicated to Client by the Company.

15. The Company, in its sole discretion, shall make the final determination regarding any dispute over the level of certification pursuant to NGBS Green or the WRI score attained.

16. Client shall not misrepresent the certification status of Projects.

17. The Company shall incur no liability with respect to nonperformance or delay in performing any act required of it under this Agreement, if such nonperformance or delay is caused by act of God or the public enemy, strikes, the requirements of any law or governmental regulations or orders, or any other circumstances beyond the control of the Company.

18. Client shall indemnify, hold harmless, and defend (and pay any and all other expenses and attorney's fees in connection therewith) the Company and its officers, directors, agents, affiliates, and employees from and against any and all actions, liability, loss, claims and demands whatsoever arising out of any actual or alleged acts or omissions of Client in connection with Project certification, except to the extent that any such injury or damage is found to be due to the gross negligence or willful misconduct of the Company. The obligations of Client under this paragraph shall survive any suspension, revocation, termination, or cancellation of this Agreement.

19. The Agreement shall commence on the date of execution, and unless modified by mutual agreement of the parties or terminated earlier pursuant to the terms of the Agreement, and shall continue for four (4) years. The Agreement may be extended or renewed by mutual agreement.

20. Except as otherwise provided herein, this Agreement may be terminated with cause by either party upon sixty (60) days prior written notice to the other. Notice shall be sent to the signatory at the address in this Agreement, or to such other person and address as the party may designate in writing.

21. This Agreement may be suspended and/or terminated by the Company upon written notice for failure by Client to comply with any term of this Agreement.

22. Marketing guidance for the Certification programs is available on the Company's website (www.HomeInnovation.com/MarketGreenCertified), but logos and certification marks associated with NGBS Green and/or WRI certification are accessible only via a link provided directly to the Client and/or Client's designated

marketing representative. Client shall display logos or marks of the Company or the certification program(s) only as expressly permitted by this Agreement, unless the Company grants a written exception.

(a) Client acknowledges and agrees that the Company has the sole and exclusive right and authority to license others to use the "Home Innovation NGBS Green Certified" mark ("NGBS Green Certified Mark"), the "Home Innovation NGBS Green Registered" mark ("NGBS Green Registered Mark"), the "Home Innovation NGBS Green Partner" mark ("NGBS Green Partner Mark"), the Certified WRI mark, and the "NGBS Green Home Innovation Research Labs" mark ("NGBS Green Program Mark"), each of which is set forth below (collectively "the Marks") in their stacked formats; horizontal formats also exist and can be used interchangeably with those included below depending on Client's space considerations in marketing materials. Client further acknowledges and agrees that the Company may change the design, format, or text of the Marks at any time in its sole discretion.



(b) The Company grants to Client seeking NGBS Green certification, while Client complies with Client's obligations under this Agreement, the non-exclusive right to use the NGBS Green Partner Mark. The NGBS Green Certified Mark may only be used in connection with specific Projects that are NGBS Green Certified pursuant to this Agreement. The NGBS Green Registered Mark may only be used in connection with specific Projects for which Client is actively seeking certification pursuant to this Agreement. Client shall comply with all other terms of use in any style manual or other guidelines concerning use of all the Marks. The NGBS Green Partner mark is not available to clients solely seeking WaterSense or WRI certification, independent of NGBS Green certification.

(c) Notwithstanding any other provision in this Agreement, Client shall be solely responsible for ensuring its use of the Marks complies with all applicable governmental laws, rules, regulations, and guides, including but not limited to any applicable "Guides for the Use of Environmental Marketing Claims" of the Federal Trade Commission.

(d) All use of the Marks by Client shall inure to the sole and exclusive benefit of the Company. Client shall not contest the Company's rights in the Marks. This obligation shall survive any termination of this Agreement.

(e) Client shall not use the Marks in any way that is misleading or otherwise misrepresents the certification status of any Project pursuant to this Agreement. The NGBS Green Certified Mark represents only that the Project is in substantial conformance with the applicable level (Emerald, Gold, Silver, Bronze, or Certified for buildings; One Star, Two Stars, Three Stars, or Four Stars for land development) of the NGBS, and Client agrees not to use the NGBS Green Certified Mark to represent any broader claim. Client will not state or suggest, directly or indirectly, that the Company is guaranteeing, endorsing, recommending, warranting, or certifying code compliance of the Project that may be certified pursuant to this Agreement. None of the Marks is a representation, warranty, or guarantee of Project performance or certification of code compliance.

(f) No other right or license is granted by the Company to Client, either express or implied, with respect to any other trademark, trade name, service mark, or other intellectual property right owned, possessed, or licensed by or to the Company.

(g) Upon the expiration of this Agreement or any earlier termination thereof: (i) all rights granted to Client hereunder shall automatically revert to the Company; and (ii) Client shall discontinue use of any advertising, marketing, promotional, or other material bearing the NGBS Green Partner and/or NGBS Green Registered Marks (the NGBS Green Certified Mark, WaterSense label, and Certified WRI Score may continue to be used in perpetuity to market any/all Projects that were certified prior to expiration or termination of this Agreement; certifications never expire).

23. This Agreement has been finally executed in the State of Maryland. This Agreement shall be governed by and construed in accordance with the substantive law of the State of Maryland, without regard to the conflicts of law rules thereof.

24. In the event any one or more of the provisions contained in this Agreement shall for any reason be held invalid, illegal or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any of the other provisions of this Agreement.

25. This Agreement may not be modified orally or in any manner other than by an agreement in writing and signed by the parties.

26. This Agreement supersedes all proposals, oral or written, and all other communications or previous agreements between the parties relating to the subject matter of this Agreement.

27. This Agreement confers rights and obligations only on the parties hereto and is not intended, and shall not be construed, to confer any rights on any person or organization not a party hereto.

28. Client shall carry and maintain, at its expense, a standard commercial general liability insurance policy affording protection with respect to bodily injury, death, property damage, advertising injury, and personal injury of not less than one million dollars (\$1,000,000) per occurrence. The insurance company providing such insurance, as well as the form of such insurance, shall be subject to the approval of the Company; such approval will not be unreasonably denied or delayed. The insurance policy shall add Home Innovation Research Labs and its officers, directors, agents, affiliates, and employees, as additional insureds for liability with respect to or arising out of the work of Client. Such insurance shall be primary and non-contributory and shall contain a provision by which the insurer agrees that such policy shall not be cancelled, materially changed, or not renewed without at least thirty (30) days notice to the Company. Each such policy, or a certificate thereof, shall be given to the Company promptly upon execution of this Agreement.

29. Each party waives all rights and claims against the other party, and its respective agents, affiliates, and employees, and against any of their subcontractors and their agents and employees, for all damages, losses, fines, expenses, costs, and fees, but only to the extent of the party's actual recovery of insurance proceeds therefor.

30. Before any party may commence an action or amend a complaint to add a claim arising out of or in connection with this Agreement, the claim must be submitted to mediation, unless mediation is waived in writing by each party to this Agreement. The complaining party shall send a written demand for mediation to the other party. If the parties fail to agree on a mediator within fifteen (15) days of the demand, the complaining party may petition the American Arbitration Association or other recognized mediation service for the appointment of a mediator. The mediator shall commence the mediation within thirty (30) days after being selected. The mediation shall be completed no later than fifteen (15) days after being commenced. The costs of the mediation shall be shared equally between the parties. The costs of the mediation are recoverable by the party that prevails in any subsequent litigation of the claim.

31. BY THE EXECUTION AND ACCEPTANCE OF THIS AGREEMENT, EACH PARTY KNOWINGLY, VOLUNTARILY, AND INTENTIONALLY WAIVES ANY RIGHT EACH PARTY MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY LITIGATION ARISING OUT OF OR IN CONNECTION WITH THIS AGREEMENT OR ANY CONDUCT, OMISSION, OR STATEMENTS (WHETHER VERBAL OR WRITTEN) OF ANY PARTY WITH RESPECT THERETO. THIS PROVISION HAS BEEN NEGOTIATED BY THE PARTIES AND IS A MATERIAL INDUCEMENT TO THE PARTIES TO ACCEPT THIS

AGREEMENT. THIS WAIVER IS KNOWINGLY, WILLINGLY, AND VOLUNTARILY MADE BY EACH PARTY, AND EACH PARTY REPRESENTS THAT NO REPRESENTATIONS OF FACT OR OPINION HAVE BEEN MADE BY ANY INDIVIDUAL TO INDUCE THIS WAIVER OF TRIAL BY JURY OR IN ANY WAY TO MODIFY OR NULLIFY ITS EFFECT. EACH PARTY FURTHER REPRESENTS THAT IT HAS BEEN REPRESENTED IN THE SIGNING OF THIS AGREEMENT AND IN THE MAKING OF THIS WAIVER BY INDEPENDENT LEGAL COUNSEL, SELECTED OF ITS OWN FREE WILL, AND THAT IT HAS HAD THE OPPORTUNITY TO DISCUSS THIS WAIVER WITH COUNSEL.

The person signing this agreement hereby warrants that he/she has the legal authority to execute this agreement on behalf of the respective party, and that such binding authority has been granted by proper order, resolution, or other authorization of the entity. The other party is fully entitled to rely on this warranty and representation in entering into this Agreement.

HOME INNOVATION RESEARCH LABS, INC.

Signature

Date

Name William M. Ingley

(Printed or Typed)

Title Vice President and CFO

(Printed or Typed)

CLIENT

Signature

Date

Name _____

(Printed or Typed)

Title _____

(Printed or Typed)



Home Innovation
RESEARCH LABS™