Minimum Requirements for Green Globes Multifamily Performance Plus (NC)

To be certified through Green Globes Multifamily Performance Plus for New Construction (NC), projects must achieve all Minimum Requirements for Ventilation and either Energy or Water. In addition, projects must also achieve a minimum 35% total score out of all applicable points in the Green Globes Multifamily Performance Plus NC program. Minimum Requirements must be met to be eligible for the program but are separate from the criteria used in the assessment. Points are awarded for criteria within the survey, not for meeting the minimum requirements.

Meet all Ventilation Minimum Requirements, and either Energy or Water Minimum Requirements.

VENTILATION MINIMUM REQUIREMENTS

Building design must establish and meet minimum indoor air quality performance by meeting all three Ventilation Minimum Requirements listed below.

1. Ventilation Air Quantity

The quantity of ventilation for the building is compliant with one of the following:

- **Option 1:** ANSI/ASHRAE Standard 62.1-2013 Ventilation for Acceptable Indoor Air Quality;


- **Option 3:** ICC International Mechanical Code (ICC IMC 2015), Chapter 4;
  ICC International Mechanical Code 2015, Chapter 4: [https://codes.iccsafe.org/content/IMC2015/chapter-4-ventilation](https://codes.iccsafe.org/content/IMC2015/chapter-4-ventilation)

- **Option 4:** IAPMO UMC (2015) Uniform Mechanical Code;

- **Option 5:** Local codes or standards (if more stringent).

2. Air Handling Equipment

Equip air handling equipment with filtration as follows:

- Air handling equipment that provide ventilation air (e.g. central mixed air equipment, make-up air equipment, ventilation equipment for “compartmental” systems such as fan coils or unitary heat pumps): minimum MERV 13; and
- Terminal equipment that circulates room or zone air (e.g. fan coils, unitary heat pumps): minimum MERV 8.

*Not applicable where non-ducted circulating unitary equipment serves only a single zone (e.g. unit heaters, force-flows).*
3. Operations & Maintenance Plan

Specify regular ventilation maintenance and indoor air quality (IAQ) in an Operations & Maintenance (O&M) Plan. Ensure that specific issues (e.g. dirty air filters, dirty air return grills, maintenance of mechanical units, etc.) are identified and a regular maintenance plan is developed for maintaining IAQ goals.

ENERGY MINIMUM REQUIREMENTS

Building design must achieve 25% or greater projected energy consumption savings over respective established baseline and must meet all three (3) Energy Minimum Requirements.

1. Energy Efficient Design

Projects must achieve 25% or greater projected energy consumption savings through one of the following options.

Generate an energy model for the entire building, input energy use and building characteristics into ENERGY STAR Target Finder, and choose one of the following:

- **Option 1: ENERGY STAR® Score** - For multifamily properties with 20 or more units, Achieve an ENERGY STAR performance score of 75 or greater in the Target Finder program. See 3.3.1.1.1 for additional guidance.

- **OR**

- **Option 2: EUI Reduction** - Demonstrate the proposed design targets a 25% or greater reduction of energy use intensity (EUI) compared to the national median source EUI.

2. Energy Efficient Equipment & Products

Where not already covered by Energy Efficient Design, install ENERGY STAR-labeled, FEMP-designated, and/or AHAM Verifide energy efficient products and appliances (including clothes washers, dishwashers, and refrigerators), if such products and/or appliances are being provided.

ENERGY STAR Qualified Product Lists: [http://www.energystar.gov](http://www.energystar.gov)


AHAM Verifide: [http://ahamverifide.org/search-for-products/](http://ahamverifide.org/search-for-products/)

3. Energy Performance Monitoring & Tracking

Confirm that the local utility or on-site master energy meter(s) provide, at a minimum, aggregated whole-project energy consumption data for each energy utility type. Where local utility or current meters do not provide such data install energy meters that do.

Commit to entering energy consumption data into ENERGY STAR Portfolio Manager to track ongoing performance and sharing of that data with Green Building Initiative. Document for future performance verification.
WATER MINIMUM REQUIREMENTS

Building must achieve 25% or greater projected water consumption savings over respective established baseline and must meet both Water Minimum Requirements.

1. Water Consumption Savings

Choose either the Prescriptive Path or the Performance Path:

1.A Prescriptive Path – Low Flow Fixtures and Fittings

Projects following the Prescriptive Path for Water Consumption Savings must install low flow fixtures and fittings that meet or are lower than the following volume ratings:

1. Water closets (toilets) – 1.28 gpf or dual flush (1.0-1.6 gpf)
2. Urinals – 0.125 gpf
3. Private lavatory faucets – 0.5 gpm
4. Public lavatory faucets – 0.5 gpm
5. Kitchen faucets – 1.5 gpm
6. Showerheads – 1.75 gpm
7. Clothes washers – 4.0 Water Factor (WF/IWF)
8. Dishwasher – 5 Gal. per cycle

1.B Performance Path – EPA 1-100 Water Score

Projects following the Performance Path for Water Consumption Savings must achieve 25% or greater projected water consumption savings by achieving a water score of 75 or greater using EPA’s 1-100 Water Score for Multifamily Buildings within Portfolio Manager.

Portfolio Manager Technical Reference – EPA Water Score for Multifamily Housing in the United States:

- https://www.epa.gov/watersense/water-score-multifamily-housing

2. Water Performance Monitoring & Tracking

Confirm that the local utility or on-site master water meter(s) provide, at a minimum, aggregated whole-project water consumption data. Where local utility or current meters do not provide such data install water meters that do.

Commit to entering water consumption data into ENERGY STAR Portfolio Manager to track ongoing performance and sharing of that data with Green Building Initiative. Document for future performance verification.
Minimum Requirements for Green Globes Multifamily (NC)

To be certified through Green Globes Multifamily for New Construction (NC), projects must achieve all Minimum Requirements for Ventilation and either Energy or Water. In addition, projects must also achieve a minimum 35% total score out of all applicable points in the Green Globes Multifamily program. Minimum Requirements must be met to be eligible for the program but are separate from the criteria used in the assessment. Points are awarded for criteria within the survey, not for meeting the minimum requirements.

Meet all Ventilation Minimum Requirements, and either Energy or Water Minimum Requirements.

VENTILATION MINIMUM REQUIREMENTS

Building design must establish and meet minimum indoor air quality performance by meeting all three Ventilation Minimum Requirements listed below.

1. Ventilation Air Quantity
The quantity of ventilation for the building is compliant with one of the following:

- **Option 1**: ANSI/ASHRAE Standard 62.1-2013 Ventilation for Acceptable Indoor Air Quality;


- **Option 3**: ICC International Mechanical Code (ICC IMC 2015), Chapter 4;
  ICC International Mechanical Code 2015, Chapter 4: https://codes.iccsafe.org/content/IMC2015/chapter-4-ventilation

- **Option 4**: IAPMO UMC (2015) Uniform Mechanical Code;
  2015 Uniform Mechanical Code: http://epubs.iapmo.org/UMC/mobile/index.html#p=1

- **Option 5**: Local codes or standards (if more stringent).

2. Air Handling Equipment
Equip air handling equipment with filtration as follows:

- Air handling equipment that provide ventilation air (e.g. central mixed air equipment, make-up air equipment, ventilation equipment for “compartmental” systems such as fan coils or unitary heat pumps): minimum MERV 13; and

- Terminal equipment that circulates room or zone air (e.g. fan coils, unitary heat pumps): minimum MERV 8.

Not applicable where non-ducted circulating unitary equipment serves only a single zone (e.g. unit heaters, force-flows).
3. Operations & Maintenance Plan
Specify regular ventilation maintenance and indoor air quality (IAQ) in an Operations & Maintenance (O&M) Plan. Ensure that specific issues (e.g. dirty air filters, dirty air return grills, maintenance of mechanical units, etc.) are identified and a regular maintenance plan is developed for maintaining IAQ goals.

ENERGY MINIMUM REQUIREMENTS
Building design must achieve 15% or greater projected energy consumption savings over respective established baseline and must meet all three (3) Energy Minimum Requirements.

1. Energy Efficient Design
Projects must achieve 15% or greater projected energy consumption savings through one of the following options. Generate an energy model for the entire building, input energy use and building characteristics into ENERGY STAR Target Finder, and choose one of the following:

- **Option 1: ENERGY STAR® Score** - For multifamily properties with 20 or more units. Achieve an ENERGY STAR performance score of 70 or greater in the Target Finder program. See 3.3.1.1.1 for additional guidance.

- **Option 2: EUI Reduction** - Demonstrate the proposed design targets a 15% or greater reduction of energy use intensity (EUI) compared to the national median source EUI.

2. Energy Efficient Equipment & Products
Where not already covered by Energy Efficient Design, install ENERGY STAR-labeled, FEMP-designated, and/or AHAM Verifide energy efficient products and appliances (including clothes washers, dishwashers, and refrigerators), if such products and/or appliances are being provided.

ENERGY STAR Qualified Product Lists: [http://www.energystar.gov](http://www.energystar.gov)
AHAM Verified: [http://ahamverifide.org/search-for-products/](http://ahamverifide.org/search-for-products/)

3. Energy Performance Monitoring & Tracking
Confirm that the local utility or on-site master energy meter(s) provide, at a minimum, aggregated whole-project energy consumption data for each energy utility type. Where local utility or current meters do not provide such data install energy meters that do.

Commit to entering energy consumption data into ENERGY STAR Portfolio Manager to track ongoing performance and sharing of that data with Green Building Initiative. Document for future performance verification.
WATER MINIMUM REQUIREMENTS

Building must achieve 15% or greater projected water consumption savings over respective established baseline and must meet both Water Minimum Requirements.

1. Water Consumption Savings

Choose either the Prescriptive Path or the Performance Path:

1.A Prescriptive Path – Low Flow Fixtures and Fittings

Projects following the Prescriptive Path for Water Consumption Savings must install WaterSense-labeled low flow fixtures and fittings where installed and/or supplied. In lieu of the WaterSense label, install low flow fixtures and fittings that meet or exceed prescribed, more stringent volume ratings:

1. Private lavatory faucets – 0.8 gpm
2. Public lavatory faucets – 0.5 gpm
3. Kitchen faucets – 1.5 gpm
4. Showerheads – 1.75 gpm

1.B Performance Path – EPA 1-100 Water Score

Projects following the Performance Path for Water Consumption Savings must achieve 15% or greater projected water consumption savings by achieving a water score of 70 or greater using EPA’s 1-100 Water Score for Multifamily Buildings within Portfolio Manager.

Complete the five steps for computing a score, as detailed in the ENERGY STAR® Score Technical Reference. Note that a water model can be created using ENERGY STAR’s programs, in lieu of providing 12 months of water data.


2. Water Performance Monitoring & Tracking

Confirm that the local utility or on-site master water meter(s) provide, at a minimum, aggregated whole-project water consumption data. Where local utility or current meters do not provide such data install water meters that do.

Commit to entering water consumption data into ENERGY STAR Portfolio Manager to track ongoing performance and sharing of that data with Green Building Initiative. Document for future performance verification.

Exception Policy

GBI reserves the right to issue energy or water exceptions on a case-by-case basis as needed for unique circumstances, e.g., function of the building requires a limited amount of high flow fixtures. Green Globes Multifamily NC projects must still meet the 15% or greater energy or water consumption savings requirement.