

City of Somerville Massachusetts  
Office of Sustainability and Environment  
93 Highland Ave  
Somerville, MA 02143

August 11, 2021

**Re: LEED "Certifiability" AFFIDAVIT for 371 Highland Avenue, Somerville, MA**

Dear Office of Sustainability,

I have been working with the development and design team of 371 Highland Avenue and can verify that the project intends to meet the City of Somerville's LEED Certifiable requirements. 371 Highland Avenue, in Somerville, Massachusetts is a multifamily residential building containing 22 dwelling units. The project has been designed to meet a minimum of Gold "Certifiable" level under the LEED for Homes v4 program. The project is currently targeting 65.5 Points based on the attached checklist. Below outlines the list of strategies to meet these requirements.

I am a LEED for Homes AP, a LEED for Homes Green Rater and Provider and have certified thousands of residential units through the LEED for Homes program. I have put together the attached LEED Scorecard, which aligns with the building design and shows a target of LEED Gold Certification.

Sincerely,



Ian Johnson  
LEED AP HOMES/BD+C, WELL AP, CPHC  
Senior Director  
Linnean Solutions

# SUSTAINABILITY NARRATIVE

371 Highland Avenue, SOMERVILLE MA



## SUSTAINABILITY STRATEGIES FOR LEED CREDITS

The project is fulfilling all prerequisites for all categories, in addition to the listed optional LEED credits.

### Integrative Process

#### IP Credit: Integrative Process (1/2 pts)

The project will have an integrated team consisting of, but not limited to, architecture, mechanical, sustainable design, civil engineering and landscape architecture in addition to the builder and verification team. All design team members will be involved in at least three phases of design and construction and will conduct regular monthly meetings to review the project.

### Location & Transportation

#### LT Pre-requisite: Floodplain Avoidance Development (required)

The project is not located on land within a flood hazard area and therefore complies.

#### LT Credit: LEED for Neighborhood Development (15 pts)

The team is not pursuing this path.

#### LT Credit: Site Selection (8/8 pts)

The project complies with the following criteria for a total of 8 points.

- Avoidance of Sensitive Land
- Is adjacent to land that is at least 75% developed
- Located within ½ mile of open space that is at least ¾ acre
- Meets the requirement of an open street network with at least 90 intersections within 1 square mile
- Located on a bicycle network
- The project includes 22 long term bicycle storage spaces located inside building as well as 6 short term spaces adjacent to the entrance.

#### LT Credit: Compact Development (3/3 pts)

The project consists of 22 dwelling units on .28 acres of land which exceeds the 35DU/acre yielding 3 points plus an additional exemplary performance point.

#### LT Credit: Community Resources (2/2 pts)

The project is located in an area with more than 20 community resources in a ½ mile walking distance. An exemplary performance credit may also be possible based on the credit requirements.

#### LT Credit: Access to Transit (2/2 pts)

The project is located within 1/4 mile walking distance of numerous public bus stops totaling more than 100 week day trips and 50 weekend trips.

## Sustainable Sites

### SS Prerequisite: Construction Activity Pollution Prevention (Required)

During construction, contractors will setup up hay bale swales, erosion blankets, sandbags and use stormwater filters to minimize erosion and water contamination from the site as much as possible.

### SS Prerequisite: No Invasive Plants (Required)

No invasive plant species will be introduced to the landscape.

### SS Credit: Heat Island Reduction (1/2 pts)

The project will aim to use a variety of methods to reduce heat island effect including one or more of the following:

- Shading hardscape areas
- Using non-absorptive materials
  - Energy Star qualified roof products (if applicable)
  - Vegetative roof
  - Paving materials with a 3-year aged SRI of at least .28 or initial SRI of at least .33

### SS Credit: Rainwater Management (0/3 pts)

The project is not pursuing this credit at this time.

### SS Credit: Nontoxic Pest Control (2/2 pts)

The following strategies can be implemented as pest control measures

- Use solid concrete foundation walls
- Design a minimum of 6" inspection space between the surface of the planned landscape grade and any non-masonry siding
- Seal all external cracks, joints, penetrations, and entry points with appropriate caulking and use rodent and corrosion-proof screens in all openings greater than 1/4"
- Design all discharge points for rain gutters, air-conditioning condensation lines, etc. such that discharge is at least 24" from the foundation
- Develop an integrated pest management policy as required for all multifamily projects

## Water Efficiency

### WE Prerequisite: Water Metering (Required)

The project will include meters or submeters for each unit.

### WE Credit: Total Water Use (0/12)

The project is not pursuing this credit at this time.

### WE Credit: Indoor Water Use (4/6)

Specified plumbing fixtures will target a water use reduction by incorporating lavatory faucets with 1.5 gpm, toilets with a 1.1 gpf, and showerheads with a 1.75 gpm.

WE Credit: Outdoor Water Use (4/4 pts)

The project will not use turf grass and incorporate only native or adaptive plant species in the landscape.

## Energy & Atmosphere

EA Prerequisite: Minimum Energy Performance (Required)

1. An energy modeler will create a baseline model to compare to a proposed energy model to support compliance with ASHRAE 90.1.
2. Each unit will also include an ENERGY STAR rated refrigerator, dishwasher or clothes washer.
3. All duct runs will be fully ducted.

EA Prerequisite: Energy Metering (Required)

Electric and gas submeters will be installed at each residential unit.

EA Prerequisite: Education of Homeowner, Tenant or Building Manager (Required)

An operations and maintenance manual binder will be provided to all individuals responsible for maintenance of the home and a 1-hour (minimum) walkthrough with the occupants will be conducted.

EA Credit: Annual Energy Use (26/30 pts)

In order to achieve this high level of energy performance we recommend implementing the following strategies:

- Hot water distribution circulating pump that is either on a timer or operated by a switch
- Pipe insulation with a minimum of R-4
- Incorporate a photovoltaic-ready design (design for future solar panels)
- Create an air-tight envelope with air leakage of exterior and demising walls no more than .06 cfm50/sf
- Windows with a U-value between .10-.15 and SHGC of .35
- Install heat pump mini splits with an average annual COP of apx 2.85 or higher (based on Mitsubishi MSZ/MUZ-FE09)
- All ductwork to be located within a conditioned space and insulated
- Use an ENERGY STAR rated domestic hot water heater
- Interior lighting to be LED and be a reduction from the ENERGY STAR baseline (.6W/sf)
- Exterior lights to be LED
- ENERGY STAR rated appliances where applicable
- Target envelope insulation:
  - Roof= R60 or higher
  - Foundation=R20
  - Walls=R-19+R-15c.i. or higher

EA Credit: Efficient Hot Water Distribution System (2/5 pts)

All pipes will be insulated with a minimum of R-4 insulation.

EA Credit: Advanced Utility Tracking (0/2 pts)

The project is not pursuing this credit.

## Materials & Resources

### MR Prerequisite: Certified Tropical Wood (Required)

All of the wood used in the project will be non-tropical, FSC certified, reused or reclaimed or USGBC equivalent.

### MR Prerequisite: Durability Management (Required)

To promote durability and performance of the building enclosure and components the following strategies will be implemented:

- Non-paper faced backing will be used in wet or high moisture areas such as at bathtubs, showers and behind fiberglass enclosures where wallboard is installed.
- Water-resistant flooring is to be used in kitchens bathroom and in entryways within 3ft of exterior doors
- A drain, drain pan and automatic shut off or flow restrictors or floor sloped to floor drain are to be installed for clothes washers over living spaces.
- Clothes dryers are to be vented directly to the exterior

### MR Credit: Durability Management Verification (0/1 pt)

The project is not pursuing this credit.

### MR Credit: Environmentally Preferable Products (1.5/5 pt)

We recommend using products with a reduced environmental impact such as FSC certified wood framing, insulation with a 25% post-consumer / 50% pre-consumer recycled content, drywall using recycled content (95% for synthetic or 10% for non-synthetic), concrete with 30% fly ash and 50% recycled aggregate, etc. At least one point will be pursued in this category.

### MR Credit: Construction Waste Management (0/3 pts)

The project is not pursuing this credit.

## Indoor Environmental Quality

### EQ Prerequisite: Ventilation (Required)

- Local exhaust systems will be designed to be compliant with the requirements of ASHRAE 62.2-2010 (or local equivalent)
- Local exhaust systems exhaust directly to the outdoors
- All bathroom exhaust fans are ENERGY STAR-labeled or and HRV/ERV is used
- The project has installed MERV11 or higher filters
- The project is located in a nonattainment for ozone

### EQ Prerequisite: Combustion Venting (Required)

WE recommend the project pursue EPA Indoor airPLUS label which will satisfy the requirements.

If natural gas or other combustible fuel sources will be used ensure that:

- No unvented combustible appliances will be installed
- Carbon Monoxide monitors are to be hard-wired installed (with back up battery) at each floor
- If space and/or water heating devices use combustible fuel sources, one of the following requirements must be met
  - Equipment is installed with closed combustion
  - Equipment is installed with power-vented exhaust
  - Equipment is located in a detached utility building or open-air facility

*EQ Prerequisite: Garage Pollutant Protection (Required)*

WE recommend the project pursue EPA Indoor airPLUS label which will satisfy the requirements.

All penetrations and connecting floor and ceiling joist bays will be sealed at conditioned spaces above the garage and all doors will be weather-stripped, carbon monoxide detectors installed, and all cracks will be sealed in conditioned spaced next to the garage.

*EQ Prerequisite: Radon Resistant Construction (Required)*

WE recommend the project pursue EPA Indoor airPLUS label which will satisfy the requirements.

The project is located within radon zone 1 and will need to comply with one of the following:

- Capillary breaks are installed according to specification 1.2 by installing polyethelene sheeting or extruded polystyrene insulation beneath the slab
- An electrical outlet will be provided near vent piping to accommodate future fan installation
- A gas-tight vertical vent pipe will be installed, extending through the conditioned space terminating above the roof

*EQ Prerequisite: Air Filtering (Required)*

WE recommend the project pursue EPA Indoor airPLUS label which will satisfy the requirements. Use MERV8 (or higher) rated filters on recirculating space conditioning systems and MERV6 filters on mechanically supplied outdoor sir systems 10ft or more of ductwork.

*EQ Prerequisite: Environmental Tobacco Smoke Control (Required)*

Smoking will be prohibited in all common areas of the building and within 25 ft of all entrances and openings. Signage will indicate that a smoking policy has been implemented.

*EQ Pre-requisite: Compartmentalization (Required)*

Each unit will have sealed penetrations through walls, ceilings, floors and vertical chases. Weather stripping will be used at all dwelling unit entry doors leading to a common hallway as well as all exterior doors and windows. We recommend targeting an air leakage of no greater than .06 cfm50/sf.

*EQ Credit: Enhanced Ventilation (1/3 pts)*

A continuously operating exhaust fan will be installed in every bathroom with a shower, bathtub or spa.

*EQ Credit: Contaminant Control (0/2 pts)*

The project is not pursuing this credit.

*EQ Credit: Balancing of Heating and Cooling Systems (1/3 pts)*

The project is a multifamily building whose average unit size is less than 1,200sf.

*EQ Credit: Enhanced Compartmentalization (0/3 pts)*

The project is not pursuing this credit.

*EQ Credit: Combustion Venting (2/2 pts)*

No fireplaces or woodstoves will be used in the project.

*EQ Credit: Enhanced Garage Pollutant Protection (0/1 pts)*

The project is not pursuing this credit.

EQ Credit: Low Emitting Products (0/3 pts)

The project is not pursuing this credit.

EQ Credit: No Environmental Tobacco Smoke (0/1 pts)

The project is not pursuing this credit.

## **Innovation**

IN Credit: Innovation (2/5 pts)

The project is targeting the following credits:

1. Exemplary Performance – Compact Development
2. Exemplary Performance – Community Resources

## **Regional Priority**

RP Credit: Regional Priority- Specific Credit (3/4 pts)

The project is targeting the following credits available to zip code 02144:

1. Annual Energy Use
2. Access to Transit
3. Non-Toxic Control