

SUSTAINABILITY

LEED COMPLIANCE

The Project will meet the City of Newton's Green Buildings requirement, with the building achieving certifiability at the Gold level through the United States Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED) Building Design and Construction (BD+C) Multifamily Mid-Rise Version 4 (LEED MR) rating system.

The proposed LEED rating systems track the sustainable features of a project by achieving points in the following categories: Location and Transportation, Sustainable Sites, Water Efficiency, Energy and Atmosphere, Materials and Resources, Indoor Environmental Quality, Innovation and Design Process, and Regional Priority Credits.

The narratives below detail the strategies by which the Project will meet various prerequisite and credit requirements for the building under the LEED MR rating system. The team will continue to evaluate design options against LEED requirements with the goal to design and construct a building which minimizes its impact on the environment, creates an engaging and healthy space for occupants and reduces operating costs. The LEED MR checklist is provided separately.

INTEGRATIVE PROCESS

IPc Integrative Process

1 Point

The Project includes team members whose capabilities include architectural design, mechanical engineering, building science, green building and sustainable design, landscape architecture, and civil engineering. Additionally, all team members will be involved in schematic design, design development, final design, and LEED planning.

LOCATION & TRANSPORTATION

LTp Floodplain Avoidance

REQUIRED

The Project is located on an urban infill location and does not include any area in the 100-year Federal Emergency Management Agency (FEMA) floodplain.

LTc Site Selection

8 Points

The Project is located on a lot that is at least 75% previously developed and with a perimeter of >75% previously developed land; this qualifies as infill land. Project residents have nearby (within ½-mile walking distance) access to open space at least ¾ acre in size and have access to a qualifying bike network. Additionally, the project is located in an area of high intersection density, defined as an area whose existing streets and sidewalks create at least 18 intersections per square mile for projects less than 2 acres. Lastly, the site is not categorized as sensitive land.

LTc Compact Development

2 Points

The Project contains a total of 50 new construction dwelling units and is located on less than 1 acre of buildable land.

LTc Community Resources

2 Points

The Project is located within a 1/2-mile walking distance to at least 18 qualifying community resources.

LTc Access to Transit

1 Point

The Project is located within 1/2-mile of the West Newton MBTA station and several MBTA bus stops, providing at least 74 weekday and 40 weekend trips. The nearby MBTA station provides access to the Worcester/Framingham Commuter Rail line. Nearby bus stations provide access to the 553 and 554 lines.

SUSTAINABLE SITES

SSp Construction Activity Pollution Prevention

REQUIRED

The Project will create a Stormwater Pollution Prevention Plan (SWPPP) to minimize runoff and erosion from the site throughout construction. Daily, weekly, and monthly inspections will ensure that installed methodology is kept in good condition. Additionally, the plan will address the following requirements, as applicable:

- Protection of stockpiles and disturbed soil during on-site storage for reuse,
- Control of path and velocity of runoff from site,
- Protection of on-site storm sewer inlets and water bodies,
- Diversion of runoff from site hillsides,

- Protection of erosion from site slopes 15%, or greater, and
- Prevention of air pollution from dust and particulate matter.

SSp No Invasive Plants

REQUIRED

The Project will not install any invasive plantings on-site.

SSc Heat Island Reduction

2 Points

The Project will demonstrate compliance by providing high albedo roof materials. All parking provided for the project is located under cover.

SSp Nontoxic Pest Control

2 Points

The Project will include the following pest-deterrent design methodologies:

- Seal all external, unintentional cracks
- For below-grade walls, use solid concrete foundation walls
- Design discharge points for rain gutters such that discharge is at least 24-inches from home,
- Design a minimum 6-inch inspection space between the surface of the planned landscape grade and nonmasonry siding.

In addition, an integrated pest management policy will be developed that includes guidance for residents on pesticide use, housekeeping, and prompt reporting of pest problems. The plan will be incorporated into the Homeowner Education Manual.

WATER EFFICIENCY

WEp Water Metering

REQUIRED

A water meter will be provided for the whole building.

WEc Total Water Use

6 Points

The Project will utilize water fixtures with the following flow rates:

- Lavatory Faucets: 0.5 gpm
- Kitchen Faucets: 1.0 gpm
- Showers: 1.5 gpm
- Toilets: 1.3 gpf
- Urinals: 0.125 gpf

The Project will also utilize ENERGY STAR clothes washers, dish washers and refrigerators.

ENERGY & ATMOSPHERE

EAp Minimum Energy Performance

REQUIRED

The buildings will meet or exceed all applicable requirements of the Massachusetts Stretch Energy Code as well as the LEED prerequisite requirement. The building will demonstrate at least a 20% improvement over the baseline building performance rating as defined by ASHRAE 90.1-2013 Appendix G. Additionally, the building will meet the ENERGY STAR Testing and Verification (T&V) Protocols under the new ENERGY STAR Multifamily New Construction v1/v1.1 certification system.

EAp Energy Metering

REQUIRED

The buildings will include individual electric meters for each residential unit as well as a central electric meter for common loads in the building.

EAp Education of the Homeowner, Tenant, or Building Manager

REQUIRED

At construction completion, NEI will work with the Proponent to develop an Operations Training Manual that describes the sustainable aspects of installed systems and assemblies. All operations staff will participate in a 1-hour training walkthrough to view and inspect installed equipment.

Additionally, NEI will work with the Proponent to develop a Resident Green Guide to be distributed to applicable staff and/or residents at building occupancy. Distribution will be accompanied by copies of the LEED checklist as well as a 1-hour walk-through of the building and units to highlight installed LEED-related items.

EAc Annual Energy Use

20 Points

The buildings will meet or exceed all applicable requirements of the Massachusetts Stretch Energy Code as well as the LEED prerequisite requirement. Preliminary energy modeling demonstrates that the building will achieve a 20% reduction in energy cost compared to the ASHRAE-90.1 2013 baseline. The building will meet ENERGY STAR Multifamily New Construction v1/v1.1 requirements.

EAc Efficient Hot Water Distribution

2 Points

R-4 insulation will be installed on all domestic hot water pipes.

MATERIALS & RESOURCES

MRp Certified Tropical Wood

REQUIRED

The Project will utilize non-tropical wood products or utilize Forestry Stewardship Council (FSC)-certification for necessary woods from tropical countries.

MRp Durability Management

REQUIRED

The Project meet the requirements of the ENERGY STAR for Multifamily New Construction Water Management System Builder Checklist. Additionally, the following interior water management measures will be installed:

- Nonpaper-faced backer boards or mold-resistant board will be installed at bathtubs and showers.
- Water resistant flooring will be installed in kitchens, bathrooms, and laundry areas.
- A drain or drain pan will be installed at all clothes washers in or over living spaces.

MRc Durability Management Verification

1 Point

NEI will verify all of the measures listed in the ENERGY STAR Multifamily New Construction Water Management System Builder Checklist.

INDOOR ENVIRONMENTAL QUALITY

EQp Ventilation

REQUIRED

The design will include split air-to-air heat pumps in each dwelling unit, with an associated outdoor unit on the roof. Each dwelling unit will also include an energy recovery ventilator to provide exhaust ventilation to each bathroom and kitchen. The design complies with the mechanical ventilation requirements of ASHRAE 62.2-2010 Sections 4 and 7. Non-unit spaces will meet the minimum requirements of ASHRAE 62.1-2010.

Supply inlets are located at least 10-feet away from all known sources of contamination, including exhaust outlets.

EQp Combustion Venting

REQUIRED

The residential units will not include combustion appliances or fireplaces. A Carbon Monoxide (CO) monitor will be installed in each unit.

EQp Garage Pollutant Protection

REQUIRED

The building includes a natural ventilated parking area on the first level that is open to the exterior. All air-handling equipment and ductwork will be located outside the fire-rated envelope of the garage. All shared surfaces between the garage and conditioned spaces will be tightly sealed.

EQp Radon-Resistant Construction

REQUIRED

The Project is not located within a high-risk radon area (i.e. Environmental Protection Agency (EPA) Zone 1), excluding it from the prerequisite requirements.

EQp Air Filtering

REQUIRED

All mechanical ventilation and space conditioning ductwork and equipment will include minimum MERV 8 filtration media to ensure that harmful particulates are filtered out of the air stream, prior to entry into the interior spaces.

EQp Environmental Tobacco Smoke

REQUIRED

The Project will be entirely non-smoking, to be instituted through lease language. Smoking will be prohibited within 25-feet of all building entries, air intakes, and operable windows.

EQp Compartmentalization

REQUIRED

The Project will meet the LEED requirement for 0.23 CFM₅₀ per square foot of unit enclosure, to be demonstrated through blower door testing at construction completion.

EQc Enhanced Ventilation

3 Points

The Project will include continuously operating balanced exhaust and supply ventilation.

EQc Balancing of Heating and Cooling Distribution Systems

1 Point

The Project will meet the requirements of this credit by ensuring bedrooms will be pressure balanced with the rest of the unit using transfer grilles.

Additionally, supply air-flow rates will be tested to confirm they are within +/- 20% of calculated values from Air Conditioning Contractors of America (ACCA) Manual J.

EQc Combustion Venting

2 Points

The building will meet this credit requirement by not providing any fireplaces or woodstoves.

EQc Low-Emitting Products

0.5 Points

The building will reduce occupants' exposure to airborne chemical contaminants through product selection.

EQc No Environmental Tobacco Smoke

1 Point

Smoking will be prohibited throughout the building, including within living units. The prohibition will be communicated in the lease agreements. Provisions for enforcement must be included.

INNOVATION

INc HVAC Startup Credentialing Pilot Credit **1 Point**

The Project will reduce energy consumption by ensuring that heating and cooling systems operate at peak efficiency.

INc EV Charging **1 Point**

The Project will reduce pollution by promoting alternatives to conventionally fueled automobiles and Install electrical vehicle supply equipment (EVSE) in 2% of all parking spaces used by the project.

INc Exemplary Performance **0.5 Point**

The Project will satisfy the exemplary performance requirement for an additional 0.5 points for the Community Resources credit.

INc LEED Accredited Professional **1 Point**

Kevin Collins, of NEI, holds a LEED AP Homes credential and is an integral member of the Project Team.

REGIONAL PRIORITY

Annual Energy Use **1 Point**

Access to Transit **1 Point**

Heat Island Reduction **1 Point**

Non-Toxic Pest Control **1 Point**