

From: Sustainable Comfort, Inc. / June 30, 2022/

106 River Street, Newton, MA

Sustainability Goals

The 106 River Street project is a sustainably focused infill development that will provide nine new townhomes. Thirteen owner and six visitor parking spaces will be provided. The proposed three-story building contains approximately 18,873 SF. To support Newton and State of Massachusetts green goals and climate commitments, the project is committing to a low carbon footprint, and to eliminate fossil fuels using all electric heat pump technologies and targeting smaller size units to reduce emissions per person and increase density. The project will be LEED certified and is targeting the following green and high-efficient features to support its sustainability goals:

Guiding Sustainability Goals:

- Energy Efficient Mechanical Systems: High-efficiency equipment will be utilized. New townhomes will be heated and cooled by electric split heat pumps to reduce energy use and fossil fuel dependence. The project will also be renewable energy ready.
- Low Global Warming Potential Materials: The project team intends to utilize insulation products that include low global warming potential blowing agents to reduce emissions.
- Healthy Indoor Air Quality: To promote healthy indoor environment for residents and increase efficiency, the project will utilize healthy indoor air quality materials and ventilation systems.
- Walkability: Close proximity to the public transit and neighborhood amenities will reduce potential emissions associated with transportation.

Energy Narrative

The project will target Energy Star Homes V3.1 program with a HERS 55 or less utilizing all electric heat pump systems. The insulation is targeting R-5 minimum exterior rigid insulation outside 2x6 wood framing with R-21 cavity insulation, plus fully insulated roof cavity in a vaulted roof assembly, and R-10 insulated slab edge. The windows will be high performing double pane low-e insulated glass with U-0.30 or less with air-tight detailing and air sealing. The project will be blower door tested to ensure air-tight construction and will be heated and cooled using electric heat pump systems. In combination with a heat pump water heating system, the project will be all-electric and fossil fuel free to eliminate carbon emissions on site. The project will be fitted to be solar PV ready with the ability to add solar PV at a later date if the owners choose to offset the electric load of the building to achieve net-zero energy in the future. The owners could also choose to purchase off site renewables or community solar to achieve net zero energy.

LEED Certification

LEED [Leadership in Energy and Environmental Design] is a building rating program which provides a framework for healthy, efficient and cost-saving green buildings. LEED certification is a globally recognized symbol of sustainability achievement and leadership. Civico has extensive experience in the development of LEED certified housing in Newton. Features of the LEED for Homes Certification includes:

- Increased unit density with >16 units per acre
- Insulated envelope and high efficiency systems to reduce energy use
- Reduce drafts through air-tight construction
- Healthy indoor air quality through ventilation systems and low emitting materials choices such as low VOC paints and sealants and flooring.
- Noise reduction through efficient windows and insulation throughout
- Water savings by using low flow fixtures and efficient distribution systems to minimize wasted water
- Will meet EPA's solar photovoltaic specifications for a renewable energy-ready building
- Parking spaces to be designed as electric vehicle ready
- Specification of native plants and permeable asphalt pavement
- Project to be constructed on a previously developed site
- Compliance with all applicable requirements of the Massachusetts Stretch Energy Code
- Very walkable community: Walk Score of 72/100 with ample biking opportunities
- The building will meet requirements of Energy Star Homes. Features include:
 - Energy Star appliances including refrigerators, dishwashers, laundry and LED Lighting
 - High-performance insulation and windows
 - Energy efficient heat pump systems for heating, cooling, and hot water systems
 - Verified performance through third party testing

Provided on the following pages is the target LEED for Homes Checklist showing >60 points to achieve LEED Gold Certification, along with the qualifications of Sustainable Comfort, Inc. who will serve as the project HERS Rater, LEED for Homes Green Rater.

