LEED Credit Narrative

The following is a credit-by-credit analysis of the Project teams’ approach for achieving LEED v4 for BD+C New Construction at the Gold level. See the LEED-v4 BD+C New Construction Checklist, following this document.

I. PROJECT DESCRIPTION

Clarendon Hill is a residential redevelopment project located on Alewife Parkway in Somerville, MA. The project is aiming for a minimum of LEED Gold Certifiability, and is currently tracking 61 credits with an additional 11 classified as possible. Clarendon Hill is being designed to meet the criteria necessary to achieve LEED Gold Certification under the LEED v4 for BD+C: New Construction and Major Renovation Rating System of the U.S. Green Building Council. This project was submitted to Somerville Zoning in the fall of 2019, and since has been undergoing review under the newly adopted Zoning Ordinance, effective in December 2019. The proponent requests a waiver from LEED Platinum level, and aims to comply with LEED Gold level. We are confident that the project will meet LEED Gold, and will continue to evaluate potential additional credits with an eye to achieving LEED Platinum.

II. AFFIDAVIT

I, Nancy Ludwig, do hereby affirm that I have thoroughly reviewed the supporting documents for LEED v4 for BD+C: New Construction and Major Renovation and confirm that Clarendon Hill currently demonstrates compliance with the LEED criteria necessary for Gold Certification with 61 points.

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III. LEED checklist

Clarendon Hill is a residential redevelopment project located on Alewife Parkway in Somerville, MA. The project aims to meet LEED Gold Certifiability and is currently tracking 61 points with an additional 11 classified as possible. Clarendon Hill is being designed to meet the criteria necessary to achieve LEED Gold Certification under the LEED v4 for BD+C: New Construction and Major Renovation Rating System of the U.S. Green Building Council.

A. The project will meet the gold certification requirement, meeting all prerequisites and achieving 60 points total. An additional 11 points are possible.

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<td><strong>Total Points</strong></td>
<td><strong>61</strong></td>
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IV. LEED Narrative

A. Location and Transportation (12 points)

**Sensitive Land Protection:** [1 point]

Clarendon Hill is located on a parcel of land that has been previously developed. The site is currently occupied by multiple residential buildings and paved areas.

**High Priority Site:** [1 point]

Clarendon Hill is in a New Market Tax Credit Low Income Community census tract and is a HUD Difficult Development Area.

**Surrounding Density and Diverse Uses:** [4 points]

OPTION 1. SURROUNDING DENSITY: The combined average density within a ¼ mile of the project is over 22,000 Sq Ft/acre of buildable land achieving 2 points.

OPTION 2. DIVERSE USES: The building’s main entrance is within a ½ mile (800-meter) walking distance of the main entrance of more than eight (2 points) existing and publicly available diverse uses. A large
supermarket is nearby, as is a farmer’s market (community serving retail,) a gym/health club, bank, public park, school, church, and restaurants are nearby.

**Access to Quality Transit:** [3 points]

The project is within ¼ mile walk of public transit that has daily weekday trips over 144 and weekend trips over 108. The site is located within a ¼ mile of multiple bus stops, and just over a mile’s walk to Alewife rapid transit MBTA station.

**Reduced Parking Footprint:** [2 points]

Case 2: The project achieves over a 60% reduction in reduction of the base ratio for rental apartments. Basis is 1.65/dwelling unit rental. A 60% reduction from Basis is a ratio of less than .99. The project has a parking ratio of less than .66. Buildings A/B parking ratio is .62 (208/331,) Building D parking ratio is .55 (32/58,) and Building D parking ratio is .39 (67/168.)

**Green Vehicles:** [1 point]

The project will install electrical vehicle supply equipment (EVSE) in 2% of all parking spaces used by the project, for a total of 15 spaces in addition to the preferred parking spaces for green vehicles.

**B. Sustainable Sites (4 points)**

**Site Assessment:** [1 point]

A site assessment survey will be documented to include topography, hydrology, climate, vegetation, soils, human use, and human health effects, and demonstrate relationships between the site and the topics listed above, and how these features influenced the project design.

**Open Space:** [1 point]

The project site will provide outdoor space greater than or equal to 30% of the total site area.

**Heat Island Reduction:** [1 point]

Option 2: More than 75% of the parking is under cover. All of the elevator buildings include a lowest level of covered parking in the podium level.

**Light Pollution Reduction:** [1 point]

Option 1, BUG Rating Method: The project will not exceed the luminaire up light ratings, based on the specific light source installed in the luminaire, as defined in IES TM-15-11, Addendum A.

**C. Water Efficiency (4 points)**

**Outdoor Water Use Reduction:** [1 point]
The project will show that the landscape does not require a permanent irrigation system beyond a maximum two-year establishment period. The project could also achieve this credit by reducing irrigation needs by 50% from the baseline.

**Indoor Water Use Reduction:**

The project achieves a 30% reduction in water use by using low flow fixtures. Specified plumbing fixtures include 1.28 gpf WCs/ 1.0 gpm Lav Faucet/ 1.5 gpm Sinks/ 2.0 gpm showers.

**Water Metering:**

The project will include separate water meters for at least two water subsystems.

### D. Energy and Atmosphere (26 points)

**Enhanced Commissioning:**

Option 1, Path 1, The project will implement a commissioning process in accordance with ASHRAE Guideline 0-2005 and ASHRAE Guideline 1.1-2007 for HCAV&R systems. These enhanced commissioning tasks will be included in the Owner’s Project Requirements and Basis Of Design.

**Optimize Energy Performance:**

Option 1: The project will use the whole-building energy simulation method to target 42% better in energy performance.

**Demand Response:**

The project will be designed for participation in demand response programs through load shedding or shifting.

**Renewable Energy Production:**

The project will include renewable energy systems to offset 10% of the total building annual energy cost.

**Green Power and Carbon Offsets:**

The project will engage in a contract to provide 100% of total energy via green power, RECs and/or offsets.

### E. Materials and Resources (2 points)

**Construction & Demolition Waste Management**

Option 1; Path 2: The project will divert at least 75% of the total construction and demolition material; diverted materials will include at least four material streams.
F. Indoor Environmental Quality (7 points)

Enhanced Indoor Air Quality Strategies: [1 point]
The project intends to mechanically ventilate its spaces and will comply with all requirements to achieve 1 credit using option 1.

Low-Emitting Materials: [1 point]
Option 1: The project will achieve the threshold level of compliance with emissions and content standards for 2 product categories.

Construction Indoor Air Quality Management Plan: [1 point]
The project will develop and implement an indoor air quality (IAQ) management plan for the construction and preoccupancy phases of the building.

Indoor Air Quality Assessment: [1 point]
Option 1; Path 1: Before occupancy the project will install new filtration media and perform a building flush-out by supplying a total air volume of 14,000 cubic feet of outdoor air per square foot (4,267,140 liters of outdoor air per square meter) of gross floor area while maintaining an internal temperature of at least 60°F (15°C) and no higher than 80°F (27°C) and relative humidity no higher than 60%.

Thermal Comfort: [1 point]
Option 1: The project will design heating, ventilating, and air-conditioning (HVAC) systems and the building envelope to meet the requirements of ASHRAE Standard 55–2010, Thermal Comfort Conditions for Human Occupancy.

Interior Lighting: [1 point]
Option 2: The project will comply with the 4 following strategies: A,B,C,D.

Acoustic Performance: [1 point]
The project will meet the requirements, as applicable, for HVAC background noise, sound isolation, reverberation time, and sound reinforcement and masking.

G. Innovation (4 points)

Innovation: Housing types and affordability: [1 point]
The project achieves at least 15% affordable housing percentage.

Innovation: Green building Education: [1 point]
Project will employ a Green Building Education Program that informs building users and non-users on the sustainable design aspects of the project.
Innovation: Occupant Comfort Survey: [1 point]

The project will administer at least one occupant comfort survey to collect anonymous responses regarding at least the following:

- Acoustics
- Building cleanliness
- Indoor air quality
- Lighting
- Thermal comfort

LEED Accredited Professional: [1 point]

At least one principal participant of the project team will be a LEED Accredited Professional (AP) with a specialty appropriate for the project.

H. Regional Priority (2 points)

Regional Priority: [2 points]

The project achieves 2 points from Optimal Energy Performance and Indoor Water Use Reduction.