

JUNE 22, 2022

157 LANGLEY ROAD REDEVELOPMENT
NEWTON, MA

#354-22



CITY OF NEWTON SUSTAINABLE DESIGN STRATEGIES

STRATEGIES

STATUS

NOTES

**All items are subject to ongoing budget analysis and may or may not be feasible depending on estimates and hard bids.*

COMMITTED TO SUSTAINABLE STRATEGIES

A. SITE

1. Proposed site plan and structure provide more open space and greater setbacks than matter-of-right	INCLUDED	The proposed building has been designed to have greater open space and less lot coverage than matter-of-right. Parking for each unit has been limited to 1 indoor and 1 outdoor space to maximize green-space.
2. Compact footprint to reduce impervious area of site	INCLUDED	As noted in Item 1 above, we have utilized a compact footprint to maximize open-space.
3. Drought tolerant landscape	INCLUDED	The Landscaping will utilize native plantings, using those that are drought tolerant where appropriate.
4. Pervious paving to allow direct absorption of storm-water	INCLUDED	Pervious pavers will be used for the walkways and patios. Exploring the feasibility to use pervious pavers in parking areas and/or driveways.
5. Storm Water Capture and Retention	INCLUDED	Engineered, City Approved, storm water retention system will mitigate potential impact of to neighboring properties.
6. Electric Vehicle (EV) charging preparation - Pre Wiring	INCLUDED	Each Unit's garage will be appropriately pre-wired for easy installation of an EV charger.
7. Accessibility	INCLUDED	We designed one unit with easy accessibility (entrance at grade and/or by accessible ramp) to provide better access for aging population and those with mobility challenges.

B. ENERGY CONSERVATION & SUSTAINABILITY

1. Sustainability built into the site-plan and design	INCLUDED	As indicated above in Section A., the increased open space resulting from building's reduced footprint, use of pervious pavers and drought resistant paintings increases the sustainability of the project.
2. Use of foam insulation to minimize thermal bridging resulting in reduced heating and cooling loads and hence energy consumption	INCLUDED	The project will include the use of open and or closed cell foam insulation along with other insulation materials in accordance with HERS Rating Specifications.
3. Use of efficient energy efficient insulated windows and doors and windows	INCLUDED	Windows and Doors - Thermal Insulated with a maximum of 0.29 U-Factor (co-efficiency).
4. Individual mechanical systems and controls for each unit, sized to meet heating and cooling loads and to ensure comfort	INCLUDED	Each unit will have its own all electric HVAC System.
5. Separation of individual dwelling units using double-stud insulated walls with continuous air seal to isolate apartments thermally and acoustically	INCLUDED	A double Fire-wall with insulation will be installed between units to isolate units for better efficiency and minimize noise.
6. Electric Hot Water Heaters	INCLUDED	Using electric hot water heaters further reduces the buildings use of fossil fuel for this system. Exploring the use of on-demand hot water heaters to increase efficiency.
7. LED Lighting	INCLUDED	All Lighting provided will be LED.
8. High efficiency air circulation system	INCLUDED	High efficiency fans provide air circulation and help reduce heating and cooling costs. This may include high efficiency circulation fans in bathrooms, and the installation of high efficiency ERVs and make-up air units.
9. Energy Star Appliances	INCLUDED	All appliances provided will be Energy Star Certified.
10. Air/Vapor/Water barrier inspections & testing of exterior enclosure assemblies	INCLUDED	A third-party HERS testing agency has been retained to inspect air/vapor water barriers during construction.

COMMITTED TO ANALYZE – FEASIBILITY & RETURN ON INVESTMENT

1. All-electric mechanical systems vs fossil fueled systems	INCLUDED	Heating and Cooling and domestic hot water will be all electric. Electric will also be used for cooking and fireplaces.
2. Explore Implementation of Mass Save - All Electric Home Incentive Program based on HERS	INCLUDED	Attempting to comply with all components of level 1 of the Home Incentive Program.
3. Explore the use of: Recycled and Recyclable materials to reduce impact of raw material extraction and reduce waste to landfills, Low Volatile Organic Compounds (VOC) materials with no added urea formaldehyde to minimize off-gassing for occupant health, and Low maintenance materials (use of stone and cement exterior cladding as part of the siding) to increase longevity which results in less material consumption and maintenance.	ATTEMPT WILL BE MADE WHERE FEASIBLE	Materials that may be used include are: fly ash in concrete, natural wood siding, recycled steel in roofing, recycled carpet, recycled content pavers, gwb, ceramic tile. Steel roofing and siding is recyclable, so is brick, wood. Wood is also low carbon as compared to metal studs and engineered siding. Low Volatile Organic Compounds (VOC) materials such as paints, carpet adhesives, engineered wood products, and solid surfacing, will be specified accordingly. Stone and cement board cladding are included in the design, limiting paint and sealants that require maintenance.