

## Depot 2 Project - List of Sustainable Features

### **Methodology:**

The most widely recognized standards re: sustainable practices for mid-rise multi-family buildings of this type are the LEED v4 for Homes the LEED v4 for Building Design and Construction. The LEED standards are organized in 6 different categories covering a wide range of sustainable practices. This document is an outline of the Depot 2 project's conformance with the standards.

### **Sustainable Features Related to the Project's Location and Transportation**

- Project is being proposed on an existing site of which 75% of the total land is previously developed, helping to encourage construction in environmentally preferable locations and avoid development of sensitive lands. (LEED for Homes LT Sensitive Land Protection point)
- Project is being proposed on an existing site that is within ½ mile of previously developed land, helping to encourage construction in environmentally preferable locations and avoid development of sensitive lands. (LEED for Homes Infill Development point)
- Project will include bicycle parking both inside and outside the building, helping to promote bicycling and transportation efficiency to reduce vehicle distance traveled. (LEED for Homes Bicycle Network and Storage point)
- Project is designed to include an elevated density of dwelling units per acre of buildable land, helping to conserve land and promote livability, transportation efficiency, and walkability by creating compact communities. (LEED for Homes Compact Development point)
- Project will be located within ½ mile walking distance from community resources such as convenience stores, farmers market, retail, hair care, restaurants, and similar uses. Close proximity to these resources encourages daily walking and bicycling and reduces vehicle miles traveled as well as automobile dependence. (LEED for Homes Community Resources point)
- Project will be located within ¼ mile walking distance to a commuter rail station and bus stop, helping to reduce pollution and land development effects from automobile use. (LEED for Homes Access to Transit point).
- Project is not located on an existing wetland, floodplain, farmland, and is not within 100 feet of a body of water, helping to reduce the environmental impact of the development footprint. (LEED for Homes and LEED for Building Design and Construction prerequisite)
- Project will not exceed the minimum local code requirements for dwelling unit parking capacity, helping to minimize the environmental harms associated with parking facilities including automobile dependence, land consumption, and rainwater runoff. (LEED for Building Design and Construction Reduced Parking Footprint point)

- Project will include reserved Electric Vehicle Charging Stations, helping to reduce pollution by promoting alternatives to conventionally fueled automobiles (LEED for Building Design and Construction Green Vehicles point)

#### **Sustainable Features Related to the Project's Sustainable Site**

- Project will include a Construction Activity Pollution Prevention Plan where an erosion and sedimentation control plan for construction activities will be created and followed during construction, as to assist in reducing pollution from construction activities (LEED for Homes and LEED for Building Design and Construction prerequisite)
- Project's landscape design will not include invasive plant species. (LEED for Homes prerequisite)
- Project will use roofing materials that have a Solar Reflective Index equal to or greater than 82 at initial installation (60 mil TPO white roofing), helping to minimize effects on microclimates and human and wildlife habitats by reducing heat islands (LEED for Building Design and Construction Heat Island Reduction point).
- Project will place parking under cover, as to minimize effects on microclimate and human and wildlife habitats by reducing heat islands (LEED for Building Design and Construction Heat Island Reduction point).
- Project will not exceed up lighting ratings for luminaries as describes in LEED for Building Design and Construction rating system, as to increase night sky access and improve nighttime visibility. (LEED for Building Design and Construction Light Pollution Reduction point).

#### **Sustainable Features Related to the Project's Water Efficiency**

- Project will include a water submeter for each dwelling unit and for irrigation lines, which can help support water efficiency efforts by monitoring and benchmarking water use over time. (LEED for Homes prerequisite)
- Project will include WaterSense labeled plumbing fixtures (lavatory faucets, showerheads, toilets, clothes washers) with low flow ratings, helping to minimize the indoor demand for water through high-efficiency fixtures and fittings. (LEED for Homes Indoor Water Use point)
- Project will not install turf grass and will landscape with plants that are native or adapted to the region, in an effort to reduce outdoor water consumption through efficient landscaping practices. (LEED for Homes Outdoor Water Use point)

#### **Sustainable Features Related to the Project's Energy and Atmosphere**

- Project will meet the whole building energy simulation and commissioning requirements of ASHRAE Standard 90.1-2010, helping to improve the buildings overall energy performance and reduce its greenhouse gas emissions. (LEED for Homes prerequisite)

- Project will include an electricity submeter for each dwelling unit, as well as a gas meter for each unit (if applicable), which can help support energy efficiency efforts by monitoring and benchmarking energy use over time. (LEED for Homes prerequisite)
- Project will provide all individuals responsible for ongoing maintenance of the building with a binder or CD that includes the projects product manufacturer manuals, operations manuals, etc., as to sustain the performance of the home by training its occupants in the operations and maintenance of sustainable features and equipment. (LEED for Homes prerequisite)
- Project will include energy reducing features such as high efficiency boilers, LED light fixtures, sophisticated HVAC controls, increased and continuous building insulation, and window glazing with increased U-Factor values that demonstrate a percentage of energy reduction as compared to the baseline building performance listed in ASHRAE 90.1-2010 Standard. These energy efficient features aid in improving the overall energy performance and reducing the buildings greenhouse gas emissions (LEED for Homes Annual Energy Use point).
- Project will include pipe insulation on all domestic hot water piping, as a means to reduce energy consumption and the burden on water supply systems by increasing efficiency of hot water distribution. (LEED for Home Efficient Hot Water Distribution System point)
- Project is designed to include on-site renewable solar energy panels at the roof level to be used towards the building energy consumption, helping to reduce the environmental harms associated with fossil fuel energy by increasing self-supply of renewable energy. (LEED for Building Design and Construction Renewable Energy Production point)

#### **Sustainable Features Related to the Project's Materials and Resources**

- Project will use non-tropical and certified wood by the Forest Stewardship Council or approved equivalent, as to encourage environmentally responsible forest management. (LEED for Homes prerequisite)
- Project will use non-paper faced backer board, water resistant flooring at all bathrooms, drain pans at all clothes washers, and dryers vented directly to the outside, helping to promote durability and performance of the building enclosure and its components and systems. (LEED for Homes prerequisite)
- Project will use building components that were manufactured locally and/or contain postconsumer or pre-consumer content where applicable, as to increase demand for products that minimize material consumption. (LEED for Homes Environmentally Preferable Products point)
- Project will develop and implement a construction waste management plan aimed to reduce, to the greatest extent possible, the total construction waste. The intent of this is to divert from landfills and incinerators large proportions of waste. Construction waste shall be recycled as much as possible. (LEED for Homes Construction Waste Management point)

- Project will provide dedicated areas for the collection and storage of building occupants recyclable materials, as to reduce the waste that is generated by building occupants and hauled to and disposed of in landfills. (LEED for Building Design and Construction Storage and Collection of Recyclables prerequisite)

### **Sustainable Features Related to the Project's Indoor Environmental Quality**

- Project will include a ventilation system that provides outdoor air directly to each unit and that locates air inlets that are at least 10 feet from known sources of contamination, helping to reduce moisture problems and occupants exposure to indoor pollutants from kitchens, bathrooms and other sources by exhausting pollutants to outside and ventilating the outdoor air. (LEED for Homes prerequisite)
- Project will install a carbon monoxide monitor at each unit, helping to limit the leakage of combustion gases into the occupied space of the home. (LEED for Homes prerequisite)
- Project will include air filters with a minimum efficiency reporting value (MERV) of 8 or higher on all recirculating space conditioning systems, helping to protect occupant's health by reducing particulate matter from the air supply system. (LEED for Homes prerequisite)
- Project will compartmentalize each dwelling unit in an effort to minimize leakage between units by sealing penetrations in walls, floors, and ceilings, weather stripping all doors to the corridors, and weather stripping all operable windows to the outside. These measures will be done to limit the occupant's exposure to indoor air pollutants by minimizing transfer of air between units. (LEED for Homes prerequisite)
- Project will include continuously operating exhaust fans at all bathrooms with a shower or tub, as to minimize moisture problems and occupant's exposure to indoor pollutants through enhanced exhaust and ventilation system. (LEED for Homes Enhanced Ventilation point)
- Project will include walk off mats at all each primary entryway from the outdoors, helping to reduce occupant's exposure to indoor airborne contaminants through source control and removal. (LEED for Homes Contaminant Control point)
- Project will include a preoccupancy building flush, which occurs after construction ends but before occupancy where the building is flushed with fresh air as to remove dust and debris from the ducts. (LEED for Homes Contaminant Control point)
- Project will prohibit smoking throughout the building, including within dwelling units, aiding in minimizing exposure of building occupants, indoor surfaces, and ventilation air distribution systems to environmental tobacco smoke. (LEED for Homes No Environmental Tobacco Smoke point)
- Project will include some materials with low VOC content (such as interior paints, flooring, and adhesives) as to reduce concentrations of chemical contaminants that can

damage air quality, human health, productivity, and the environment. (LEED for Building Design and Construction point)

- Project will include motion sensors at corridor and stair lighting, as to reduce overall energy consumption. (LEED for Building Design and Construction Interior Lighting point).

**Conclusion:**

When complete, the Depot 2 Building will be LEED Certifiable, indicating a very high level of environmental sustainability. Additional measures such as composting collection and a Traffic Demand Management Program will also be incorporated in the design.