

**LEED for Homes Mid-Rise
Sustainable Building Summary**

LA Family Housing Campus

This project is pursuing the LEED for Homes Mid Rise certification through the USGBC. Many of the prerequisites and voluntary credits this project will pursue will create a residential housing development that will have a positive impact on its ecological and cultural environment. In ensuring the strategies and initiatives found within the LEED for Homes program the project will integrate the owners, builders, architects, tenants, and community stakeholders to contribute a lessened impact on the local environment. These impacts include yet are not limited to; community connectivity, indoor and outdoor air quality, lessened energy consumption, green house gas reduction, reduced material waste and water conservation. The LEED for Homes Certification process provides a thorough diagnostic and verification of residential buildings from design to completion that has become the standard for sustainable building practices.

The strategies and initiatives utilized are found within the LEED for Homes rating system. A key aspect to this rating system is that a Green Rater provides third party verification throughout the design and construction of the project. The Green Rater (AES) coordinates the LEED strategies, reviews the design and construction documents and performs on-site verification for the completion and integrity of the measures and finally compiles the Certification documents and submits to the USGBC Provider.

The rating system follows eight categories that impact the built environment. Some of the highlights of the program are listed below.

(ID) Innovation and Design Process:

- **Integrated Project Planning.** *The intent is to maximize the opportunities for integrated, cost-effective adaptation of green design and construction strategies.* This includes a preliminary review of the project with all the key team members including an individual with energy expertise to advise on the modeling and selection of mechanical equipment, systems and components.
- **Durability Management Process.** *To promote durability and high performance of the building enclosure and its components and systems through appropriate design, materials selection and construction practices.* The project team includes individual(s) with extensive knowledge of the techniques and strategies to develop and implement specific durability measures. The team will develop a durability plan with measures to address specific issues and a third party verifier will ensure the completion of each measure.

(LL) Linkages and Location:

- **Preferred Locations.** *Encourage the building of LEED mid-rise buildings near or within existing communities, and to rehabilitate damaged sites where development is complicated by environmental contamination.* The project will utilize an infill development that borders on at least 75% previously developed land.
- **Community resources.** *Encourage the building of LEED mid-rise buildings in development patterns that allow for walking or biking (thereby minimizing dependency on personal automobiles and their associated environmental impacts).* The project is located near a variety of community resources and amenities as well as options for public transit.

(SS) Sustainable Sites

- **Minimize Disturbed Area of Site for Mid-Rise.** *Minimize long term environmental damage to the building during the construction process.* The project is in a previously developed area and will house 94.3 units per acre increasing the density of the area and limiting the ecological impacts of human development.
- **Landscaping.** *Design landscape features to avoid invasive species and minimize demand for water and synthetic chemicals.* The project will only introduce non-invasive and 90% of plants will be drought tolerant. All landscaping will meet basic measures to ensure soft-scapes are not intrusive onto the local site.

(WE) Water Efficiency

- **High Efficiency Irrigation.** *Minimize outdoor demand for water through water-efficient irrigation.* The landscape plan is to incorporate sub-metering, drip irrigation, timers and high efficiency nozzles among other strategies. The system will be verified through a third party rating system.
- **Indoor Water Use.** *Minimize indoor demand for water through water-efficient fixtures and fittings.* The water usage, a key issue for the region, will be decreased significantly. For instance the flow rate for shower and lavatory fixtures are reduced and water-efficient clothes washer will be used to conserve water.

(EA) – Energy and Atmosphere

- **Optimize Energy Performance.** *To establish the minimum level of energy efficiency for the proposed building and systems to reduce environmental impacts associated with excessive energy use.* This project is expected to have an average energy performance 32.6% better than the 2008 Code Title 24 baseline. This will significantly reduce energy costs, both financial and environmental. Through focusing architectural and mechanical design on energy efficient measures the building will significantly reduce the amount of resources

needed to maintain indoor comfort and health levels. This prerequisite alongside the allocated credit points contributes significantly to achieving the LEED for Homes rating.

- **Appliances.** *Reduce appliance energy consumption.* The project team has procured only Energy Star Appliances or other high efficiency to reduce the plug load energy for the building.

(MR) – Materials and Resources

- **Material-Efficient Framing.** *Optimize the use of framing materials.* Design the structural elements and order a framing package that diverts 88% of waste. Strategies such as engineered systems and prefabrication are common in achieving this credit.
- **Environmentally Preferred Products.** *Increase demand for environmentally preferable products and products or building components that are extracted, processed, and manufactured within the region.* The paints, adhesives and sealants applied to the building will have a low percentage of V.O.C. (Volatile Organic Compounds). The cement and aggregate used for the foundation are sourced locally reducing transportation costs and energy.

(EQ) – Indoor Environmental Quality

- **Local Exhaust.** *Reduce moisture and exposure of indoor pollutants in kitchens and bathrooms.* The project will have exhaust and airflow systems that meet ASHRAE and ENERGY STAR standards.
- **Contaminant Control.** *Reduce occupant's and construction workers' exposure to indoor airborne contaminants through source control and removal.* All ducts and vents are to be sealed during construction.

(AE) – Awareness and Education

- **Education of the Homeowner or Tenant.** *Maintain the performance of the home by educating the occupants (i.e., the homeowner or tenant) about the operations and maintenance of the home's LEED features and equipment.* The occupants will be provided with training and an operations and maintenance manual with guidance on the features of the building, proper care and maintenance choices.