



Trend Watch: Oro Valley Receives LEED-CS Silver Certification by Jerry Yudelson, PE, LEED-AP • published in the October 2009 issue

For the first time in Arizona history, a major retail project is delivering green for the state. Vestar Development Co.'s Oro Valley Marketplace has earned Silver LEED certification from the U.S. Green Building Council, marking the first retail project in the state to earn the designation, and one of the first in the Southwest.

The Oro Valley Marketplace Shops A building was awarded 30 points in the LEED for Core and Shell 2.0 rating system, achieving a Silver certification. Yudelson Associates provided guidance to the design/construction/ownership team on LEED requirements and prepared all documentation for certification. The project met all seven prerequisites under the LEED-CS system, including minimum energy performance and minimum ventilation standards, without major changes in design.



Vestar's Oro Valley Marketplace

While this project only covers one 20,000-sq.ft. building on the site, it does show how a sustainably oriented retailer can achieve not only enough "LEED points" for basic project certification, but can move up the rating scale to the Silver level, without a lot of changes in a basic retail design specific to Arizona. Vestar's results, achieved without spending a lot of extra money, should give others retailers motivation to pursue similar LEED certification projects. Specific points were awarded for the following:

Sustainable Sites

- Site selection: avoidance of environmentally sensitive areas
- Low-emitting and fuel-efficient vehicles: the site provides preferred parking for such vehicles through signage, thus promoting their use.
- Parking capacity does not exceed local zoning requirements, encouraging efficient transportation use.
- The OVM Marketplace protects and restores the original riparian habitat, dedicating 77 acres of the development to permanent open space. In addition, the project uses native and adapted plants in landscaping, to minimize future water requirements.
- Stormwater management through vegetated swales and catch basin inserts, improve storm water quality by retaining sediment and runoff from the site.
- The roof of the building meets LEED criteria for reflectivity and emissivity, avoiding heat buildup that contributes to the "urban heat island effect."
- Site lighting for Shops A meets LEED criteria for dark sky preservation, with shielded fixtures and lights turned off after closing hours.
- Tenant design and construction guidelines for future build-out encourage water and energy conservation and maximum use of recycled-content materials, as well as minimum construction waste.

Water Efficiency

- Low-flow fixtures are specified that will save at least 30% of water use in the building, compared with a comparable structure built to minimum code requirements.

Energy and Atmosphere

- The project expects to save 18% of the energy use of a comparable building constructed to just meet minimum code requirements. Tenant build-out requirements will maintain this level of performance.
- No ozone-depleting chemicals (CFCs—chlorinated fluorocarbons or HCFCs—hydrochlorinated fluorocarbons) were used in the HVAC equipment.
- The project committed to buying more than 70 percent of its annual core and shell electricity use from green power sources in the form of renewable energy certificates (RECs) from Carbon Solutions Group, a verified third-party source. The REC covers the purchase of 34,000-kWh of green electricity (This also earned one innovation point).

Materials and Resources

- The construction process diverted more than 75 percent of construction waste from landfill disposal, by the use of waste segregation on site and local recycling resources.
- Construction materials had nearly 15 percent recycled content, as a percentage of total materials cost.
- More than 40 percent of building materials, as a percentage of total materials cost, were extracted, harvested and manufactured within a 500-mile radius of the building site. This includes concrete, natural stone, concrete masonry units, recycled/scrap steel, and rebar assemblies. (This achievement also earned one innovation point.)

Indoor Environmental Quality

- The project had a construction-period indoor air quality management plan, to ensure that the initial tenants would have a clean environment in which to work.
- Only low-emitting materials were used; meeting LEED requirements for minimum off gassing, included adhesives and sealants, paints and coatings.
- The project met LEED guidelines for thermal comfort, an important issue in the desert environment.

Innovation and Design Process

- The project earned LEED Innovation credits for committing to green exterior building maintenance, landscaping practices and integrated pest management.
- A LEED Accredited Professional was a principal member of the project team, assisting with design and construction processes to ensure they met the LEED credit requirements.

In addition to the LEED certification, Oro Valley Marketplace is the largest environmental restoration project in Oro Valley history, and today, the riparian area is a mecca for hikers, bikers, horses, shoppers and of course, birds. It opened in October 2008.

With an owner committed to doing the right thing and a cooperative design and construction team, we were able to put together a green design, construction and operations plan that represents a model for future retail development in Arizona. This project exemplifies what you can do with land use, water efficiency, energy efficiency, materials choices, leasing guidelines and operating practices, to achieve green development goals.

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