

# PROJECT PROFILE

## LEED® Facts

Tonala'calli, House of Sun & Water  
Austin, TX

LEED for Homes  
Certification awarded April, 2008

**Platinum** 98\*

|                              |         |
|------------------------------|---------|
| Innovation & Design          | 7 / 9   |
| Location & Linkages          | 5 / 10  |
| Sustainable Site             | 17 / 21 |
| Water Efficiency             | 12 / 15 |
| Energy & Atmosphere          | 30 / 38 |
| Materials & Resources        | 11 / 14 |
| Indoor Environmental Quality | 14 / 20 |
| Awareness & Education        | 2 / 3   |

\*Out of a possible 130 points

**Tonala'calli**  
Austin, Texas

## LEED for HOMES

**60% Energy Cost Saved**  
over 'HERS' Index Standard Home

**90% of Materials Affecting Indoor**  
Air Quality Made without Health  
Damaging Manmade Chemicals

**100% Water** from Rain Water  
Harvesting System

# PROJECT PROFILE

Tonala'calli (House of Sun and Water) - Austin, Texas

## Austin's First Certified LEED® Platinum Project

### PROJECT BACKGROUND

As a distinguished professor and Director of a highly regarded UT Petrophysics program, Carlos, with Laurel, a Biologist by education and translator by day, this gracious and modest couple have always been environmentally conscious. Winning awards for her landscaping and his Bonsai hobby at their previous home, creating this home is a dream coming true. As avid runners and organic devotees, having a home with healthy indoor air quality, native landscaping & organic gardens were essential goals. Having it designed to fit the terrain, the trees & the microclimate of the site was vital, as was the use of on-site and nearby materials for building responsibly and for peace of mind concerning sustainability. Having it all come together in an aesthetically pleasing manner at a reasonable cost is an added bonus. As LEED for Homes did not exist when the design was begun, becoming LEED Platinum was not a conscious plan, but resulted from what they dreamed of having from the very beginning.

### Innovation & Design Process (7/9)

Design for Passive Sustainability enhances natural ventilation and ample natural day lighting • Extended roof eaves reduce wall, window & door exposure to sun and rain • Roof design at optimal slope and direction for ample expansion of PV system • All exterior envelope penetrations thoroughly sealed to prevent critter entry

### Sustainable Sites (17/21)

Minimal turf and extensive use of drought tolerant native plants • Water permeable all-weather gravel driveway • Stainless steel mesh installed to address termite risk in lieu of soil poisoning

### Water Efficiency (12/15)

100% of water from roof harvested rainwater • Water efficient plumbing fixtures and site irrigation • Dual flush toilets installed

### Energy & Atmosphere (30/38)

Passive cooling architectural design features incorporated for Passive Sustainability • AAC walls • Very high efficiency HVAC systems • Energy Star labeled appliances • CFL bulbs installed everywhere • Porches designed and positioned for summertime breezes, extended usability, building and user shading • Operable windows positioned to augment natural ventilation during overheated season and to provide views, natural day lighting, passive solar winter heating • Interior mud plastered AAC walls, stained concrete & tiled floors, and adobe hearth provide thermal capacity storage reducing energy bills & enhancing comfort • 3.3 DC KW PV system is expandable for achieving net zero energy • Manifold plumbing system

### Materials & Resources (11/14)

On-site mountain juniper used for railing, fencing and exterior deck railing • Interior local clay plaster walls for all AAC walls • Exterior stone is quarried locally (30% from onsite) • AAC block manufactured within 500 miles of jobsite • Foundation aggregates quarried locally • Upstairs flooring is 200 year old long-leaf pine flooring from reclaimed Galveston timbers • Adobe hearth made from local materials • Fly ash over 30% content in concrete foundation

### Indoor Environmental Quality (14/20)

Detached carport • All interior trim from local tree species • Adhesives and sealants are all low-VOC or materials were installed without adhesives or sealants • Interior wall, ceilings and millwork paint complies with Green Seal Standard GS-11 • No carpet in home

### Awareness & Education (2/3)

Visit <http://www.FirstAustinLEEDHome.com/>

### ABOUT Environment Associates, Architects & Consultants

713.528.0000

Architect, pioneer and building ecologist LaVerne Williams, AIA, LEED AP is the founder and CEO of Environment Associates, Architects & Consultants of Houston, Texas, an award winning architectural firm noted for its dedication to quality of life matters and for its pioneering green home and healthful home projects since 1975. [www.EnvironmentAssoc.com](http://www.EnvironmentAssoc.com)

### is also Austin's First Certified LEED® Home

"The clients dream was to have deep green home and it just happened to be Platinum too."

LaVerne Williams, Architect

"I never want to leave."

Laurel Trevino, home owner



**Owner:** Carlos Torres-Verdin & Laurel Trevino

**Architect:** Environment Associates, LaVerne Williams, AIA, LEED® AP

**Contractor:** Custom Building, Inc.,  
**LEED for Homes Provider:** Contexts, Rater: Miki Cook

**Project Size:** 3,082 sq. ft. A/C space

### ABOUT LEED-H

The LEED for Homes Green Building Rating System is the national benchmark for the design, construction, and operations of high-performance homes. Visit the U.S. Green Building Council's Web site at [www.usgbc.org](http://www.usgbc.org) to learn more about how you can make LEED work for you. When there, visit your local USGBC chapter to learn more about getting involved locally.