



## CASE STUDY TARRYTOWN TRANSFORMATION

GREEN BUILDING RATING:



**“The Austin Energy Green Building rating is a great tool to help communicate building performance objectives. The rating worksheet established benchmarks that helped keep the subcontractors working toward the building performance goals. After construction the rating was a great way to evaluate and communicate overall project sustainability beyond lower utility bills.”**

**— Matt Weigers**  
Project Architect, Barley|Pfeiffer Architecture







## CASE STUDY TARRYTOWN TRANSFORMATION

GREEN BUILDING RATING:  
★ ★ ★ ★

### TOP FEATURES:

- » Preserved live oak trees
- » Improved thermal envelope with spray-foam insulation and energy-efficient windows and doors
- » Floating ventilated metal radiant barrier roof
- » Deep overhangs
- » 100% LED lighting inside and out
- » Variable speed air conditioner and mini-split HVAC systems
- » Electric vehicle charger

### PROJECT DESCRIPTION:

A typical 1960s ranch home was brought into the 21<sup>st</sup> century in both form and function while still fitting in with the surrounding old Austin neighborhood. The house was originally a series of small dark rooms with no connection to the outside and very little natural light. The aluminum windows and doors leaked both air and water, and the exterior walls had deteriorated. The owners expected to tear down and build anew. The architect ultimately convinced the owners to remodel the house.

### ENVIRONMENTAL FEATURES:

The design team focused on reconfiguring the existing floor plan, improving the thermal envelope and rejuvenating the façades. Utilizing the existing footprint allowed for saving all of the live oaks shading the property. Updates to the finishes, systems and lighting achieved additional sustainability goals.

To improve the envelope, the masonry façade was painted and pulled back under deep overhangs to allow the windows to be replaced with larger, more efficient windows. The home was roofed-over, not re-roofed, with a Barley|Pfeiffer Shading Umbrella — a floating ventilated metal radiant barrier roof. This method created air space that improves building envelope performance and keeps waste material out of the landfill. Exterior wall insulation was enhanced with low ozone-depleting spray polyurethane foam insulation to make the living spaces more comfortable, less humid and healthier. In addition, passive solar control strategies were incorporated to keep the home cool, to provide balanced daylighting and improve the connection of the interior to the shady front and back yards.

The major home systems were replaced with more efficient models sized in response to the newly efficient building envelope. A variable-speed heat pump with a mini-split heats and cools the home. The water heater was replaced with an ENERGY STAR® gas storage tank water heater. The owners also bought an electric vehicle and installed a charger in the downstairs garage.

Interior finishes like durable wood flooring, low-formaldehyde cabinets, modern plumbing fixtures and 100 percent LED lighting complement the exterior changes. By choosing to preserve and update their home, the owners benefitted their neighborhood and the larger environment. The other significant result of this extensive remodel is a more comfortable, healthy and efficient home fitting the budget and needs of the owners.



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### PROJECT PROFILE

**Zip Code »** 78703  
**Neighborhood »** Tarrytown  
**Building Area »** 3,060  
**Rating Date »** April 2018  
**Architect »** Barley|Pfeiffer Architecture  
**Contractor »** Ray Tonjes Builder

**Austin Energy Green Building** cultivates innovation in building and transportation for the enrichment of the community's environmental, economic and human well-being.

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