



CASE STUDY
NORTHEAK RESIDENCE

STAR RATING:
★★★★★



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“As a result of the rating process, we learned that many of the healthy house practices designed for this home could be adopted on future projects with little to no cost impact.”

— Tom Sullivan, Pilgrim Builders



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PROJECT DESCRIPTION:

The North Peak Residence, west of Austin, was designed to create a sustainable environment to raise a family, yet accommodate their changing needs over time. Applying principals recognized by Austin Energy Green Building (AEGB) for design and construction, the home went beyond basic “green” to “healthy.” Achieving a 5-star AEGB rating, this house has been a laboratory for research, challenging conventional definitions of sustainable architecture and construction. Every product and procedure was carefully reviewed by the project team for its effect on indoor air quality and the environment. The finished home was built at or near the budget of comparable traditional construction projects.

ENVIRONMENTAL FEATURES:

The North Peak Project began with an existing mid-century, split level wood frame home. A failing foundation with significant structural damage required the home to be razed. Demolition was accomplished through deconstruction and salvage methods. The new residence was sited over the footprint of the previous house to minimize impact and take advantage of deciduous trees on the southern portion of the lot. The four-bedroom main house was designed with a separate flex space to be used as both a guest house and studio. Reclaimed materials for the original structure, such as pine beams and stone, were salvaged and repurposed in the new home.

The design uses passive techniques, including solar orientation, deep overhangs, screened porches and window placements that provide cross-ventilation. The home includes 90% high-efficacy lighting, ENERGY STAR® appliances, geothermal cooling and heating, hybrid insulation, an energy-recovery ventilator, and humidity control. Materials were selected to reduce harmful VOCs and other questionable compounds. The garage is passively vented to eliminate impact to indoor air quality.

Courtyards and decks were incorporated to unite indoor and outdoor living. Drip irrigation was installed to minimize outdoor water use. Exterior lighting was selected to reduce the impact on the night sky. The finished home provides long-term durable, efficient operations and sustainable comfort.



PROJECT PROFILE

Zip Code » 78746

Neighborhood » Rollingwood

Rating Date » 04/12/12

Building SF » 3,540 sq. ft. main house +
585 sq. ft. guest house

Lot Size » 1 acre

Architect » Furman + Keil Architects

Builder » Pilgrim Building Company

Interiors » Dunnam Tita Architecture + Interiors

TOP FEATURES:

- » Low emitting materials ensure indoor air quality
- » Reuse of driveways and pad-site reduce impact to the environment
- » Geothermal heat pump HVAC system for long-term performance
- » Passive solar design with multiple open air living spaces
- » Separate flex space unit provides for evolving lifestyles

Austin Energy Green Building is leading the building industry to a sustainable future with green building rating, education and professional development services.

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