

# PLANNED FOR PERFECTION

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When architect Jed Duhon and his partner decided a whole house renovation was the best way to achieve their dream home, they went into the process with a solid plan that paved the way for a successful result.



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**T**hey had lived in their 1951 single story ranch-style house in the established Highland Park area in central Austin for a decade, realizing it no longer fit their growing family's needs. A steeply sloped backyard limited expansion options, but the existing three-bedroom, two-bathroom home no longer was viable for two kids and all their toys. The additions made by other families who lived there in the past created a mishmash of styles that no longer suited the neighborhood's prevailing architecture. Since Duhon designs homes for a living, he knows the importance of matching how a family lives with a home's layout. He organized the drawings of the renovated house around a list of four goals the family needed: 1) more space, 2) a better layout, 3) sustainability for energy savings, and 4) a better fit with other renovated homes in the neighborhood.

### Room to Breathe

Anyone who has lived with children knows the expansiveness of their toy boxes and how toys spill out into the main living areas no matter how hard parents try to contain them. To address this issue and the lack of space for guests in the small house, Duhon needed to add square footage. Because the backyard is steeply sloped, adding square footage to the existing first floor was ruled out in favor of a 1,300-square-foot second story addition containing a master suite, a study and a guest bedroom and bathroom. The new second floor addition covers about 80 percent of the original home's main floor.

"Adding square footage over an existing structure creates many challenges," says builder Royce Flournoy of Texas Construction Company. "The project required us to keep focus that the structural components of the building aligned to the

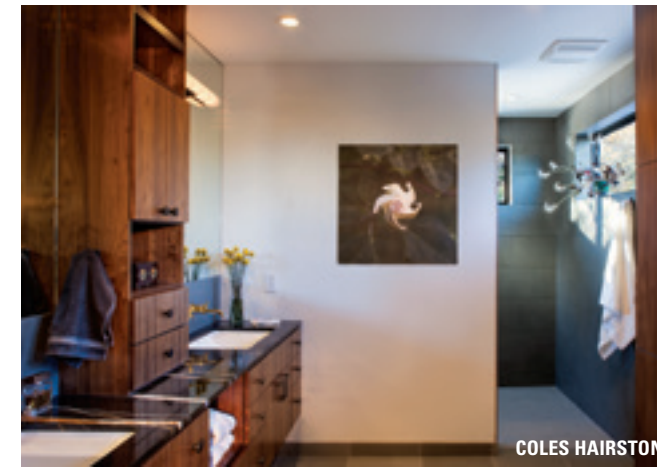
existing foundation and that additional foundation work was executed to support loads created above. As with most remodel projects, the existing structure was not in compliance with the current building code, so it was important to allocate the proper resources to correct any issues with the existing structure before adding the second floor."

Even though the first floor was taken down to the studs for a total renovation, Duhon managed to maintain some of the house's history by reusing materials. Duhon designed the new stairs, for example, using red oak to match the main level's existing red oak flooring. The stairway design matches the linear feel of the Asian-inspired furnishings, although it wasn't an easy part of the construction process. Duhon says the space to construct the stairs was so tight the framer had to mock up the framing in the field to ensure it met building codes as





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experience. Impervious to both high and low temperatures, this natural stone is resistant to damage and has a uniform grey color.

Reworking the rooms and the flow of the home gave Duhon an opportunity to rework the entire house to reflect the clean lines of modern design he enjoys. Asian-influenced furniture plays a supporting role in the new modern scene, providing a Zen feeling with its unfussy lines. The major colorways in the house are so serene that even when punctuated with a burst of red, they remain effortless and calming to the environment.

### Green Inside and Out

By adding natural stone as the kitchen's finishing materials, Duhon contributed to the home's sustainability. In addition to the kitchen, the living room and master bathroom use natural stone materials – “Nova Blue” limestone from Portugal in the living room and “Pietra Serena” grey Italian sandstone flooring and black “New Guinea” marble countertops in the bathroom. By reusing the home's existing red oak flooring from the 1950s, Duhon made the most sustainable choice of all by keeping materials out of the local landfill. Plus, as he says, something that has already lasted more than 60 years is bound to last a little longer.

“I was conscious of the chosen materials,” Duhon says, selecting low-VOC paint, little carpeting and stones to keep the interior air naturally friendly. A rainwater collection system gathers condensate runoff from the air conditioning unit to recycle.

Sustainable features are not limited to the interior, however. Duhon wrapped the house in a liquid applied membrane called Wall Guardian®, typically used in commercial applications, to ensure the house can breathe yet is well sealed. It is rated superior to the conventional weatherization wrap applied on most residences. Replacing all the old windows with new double-glazed Low E windows positively affected the monthly energy bill, especially on the back side of the house which faces westward and receives the hot afternoon sun. These thermally broken insulated windows maximize U-value and therefore energy efficiency. Spray foam insulation better fills the gaps and has the highest R value – about two times the amount of traditional blown fiberglass insulation.

On the flat roof, which is a nod to Modernist architecture, the reflective roofing material is light-colored instead of the traditional dark shingles that absorb the sun's heat, which helps keep energy bills low. Installation of solar panels cut energy costs by one-third and is expected to provide the family with a return on its investment within seven years. LED lighting throughout the house is not the only high-tech opportunity to control energy costs. An iPhone app that ties into a Lutron® system controls the home's lighting and tracks real-time energy usage.

### Blending with the World

To ensure he did not overpower the street during the renovation which added a full story of height to the house, Duhon broke up the visual lines of the front of the house with balconies and a mix of materials, including the limestone and vertical board and batten siding used in the building of the original structure. The choice of the siding, local limestone veneer and a low-sloped roof reflect the predominant architectural style of the neighborhood.

well as the design aesthetic on the original drawings. Despite the tight fit, the end result echoed the calm, quiet feel of the home's other elements.

The kitchen received a practical facelift, with finishes designed to hide kids' crumbs such as the large, grey porcelain tile flooring that Duhon says mimics the look of concrete. He specified lava rock from southern Italy for the countertops called “Pietra Lavica,” which is a material unique in his architectural





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“Remaining within the style and context of Balcones Drive was an important design consideration,” says Duhon. The design reused appropriate materials, added complementary new materials, and met the challenge of matching a growing home to a growing neighborhood with an eclectic range of architectural styles.

“Jed’s approach was the most cohesive I’ve worked with,” says Flournoy. Even though it was the team’s first project together, they created a harmonious collaborative approach, according to Flournoy, on an interesting project using a variety of residential and commercial products.

“Jed designed with a very concise use of space,” says Flournoy. “The plans were well thought out and laid out, which improved the flow of the house.”

“I always say to put your desires and wishes into the house’s design, and someone else will love it, too,” Duhon says. ❖

**See this house at 4706 Balcones Drive on the 27th Annual AIA Austin Homes Tour, November 2-3.**

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