

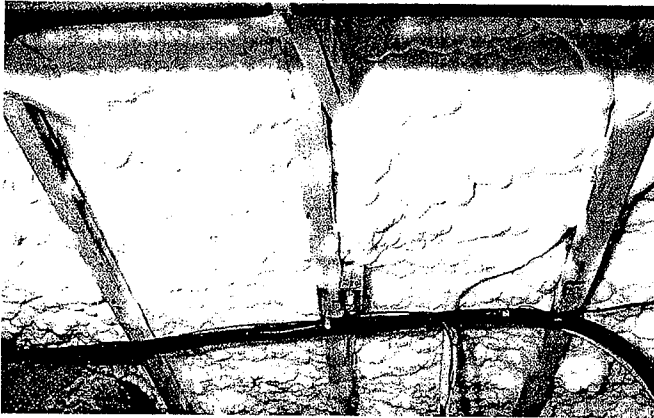
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YOUR HOME Green kitchen ingredients

How do you greenify your kitchen without falling into a money pit? Choose eco-smart countertops, flooring and cabinetry.

GREEN LIVING



Home, green home

What to look for when building environmentally-friendly house

By Allison E. Beatty
SPECIAL TO THE TRIBUNE

With all the talk about going green, it pays to understand the anatomy of an eco-friendly home when you're building a new construction house.

What are the building materials made of and are they assembled with minimal waste? How much energy is used to move materials to the site? How will the construction affect the carbon footprint and overall environment?

The process of creating a green home begins on the drawing boards when the overall design is determined. A builder and architect would look at the entire process and see where

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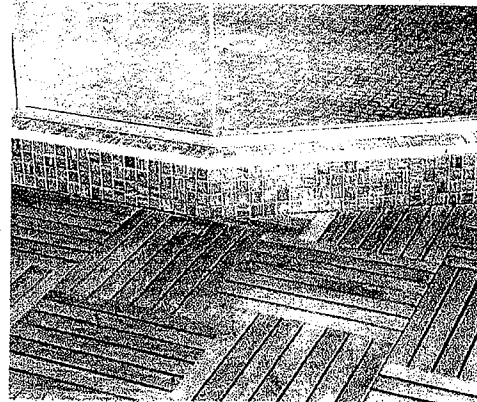
green materials and building practices could be added. There are many factors to consider, from selection of materials to the home's orientation to the sun to the indoor air quality.

"Green building is not only the energy efficiency and carbon footprint, but the health aspects," said Bob Horner, co-

principal of Evanston-based Winthrop Properties, which is developing Winthrop Club, a high-rise condominium building in Evanston that is certified as a green building.

The Evanston project is being built with a variety of green aspects, from sustainable materials to wind-, water- and solar-powered construction to carpeting and other products with low volatile organic compounds (VOCs). The project also uses recycled steel and fly ash, a steel component that is used in place of cement when making concrete.

After a builder weighs all the design and material decisions, the next stage is planning the building process. This looks at



The key to home energy efficiency is its envelope. Here, the ceiling insulation (top left) is a spray-on material that expands to 100 times its size, sealing air leaks. Top right: Bamboo flooring is a green alternative. Above, a bathroom with teak wood that is recycled and has natural oils to prevent rotting. SUSAN BIDDLE/WASHINGTON POST FILE

everything from the site preparation to the movement of workers and trucks around the building site.

When preparing the site, a key focus is on reducing energy usage and the disruption to the

environment.

"If you're excavating for a basement you want to redistribute the dirt around the job site instead of carrying it away," said

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What to look for in an environmentally-friendly house

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Jonathan Shack, a partner with Homescape Inc., a building company in Berwyn.

This type of approach helps reuse the material; as well as reduce the energy output from trucks driving to the site and carrying away dirt.

The movement of materials to a job site also is important from an energy usage and recycling perspective. A bamboo floor is considered green because it is made from a renewable grass. If

that bamboo is coming from the West Coast, however, it might not be considered as green as one coming from two states away. "If you're shipping from within 500 miles you're burning less fuel when getting materials to your site," Horner said.

The assembly of the materials on the job site also is important as it affects the amount of materials used. Wall panels and roof trusses that are put together in a factory can drastically reduce the need to cut two by four pieces of lumber on the job site. All those small,

unused scraps of wood can add up to a lot of waste, particularly in a large subdivision.

"Any premanufactured systems are better," Shack said. "They're more efficient. It uses less generator power [to fuel the cutting], and it reduces the carbon footprint from the workers on the job site."

Mechanical systems are another factor in the green building process. Geothermal heating and cooling systems that take heat from the ground are one option, as they eliminate or reduce

the need for a traditional furnace and air conditioner. This type of system can cost \$40,000 or more in a single-family home, which typically doesn't provide a payoff for seven to 10 years.

Other products to consider are high-efficiency furnaces, on-demand hot water tanks, and low flush toilets. While the cost is higher for many of these products, the payback for many is three to five years, said Nick DiCosola, president of Distinguished Dwellings Ltd., a home builder in Hinsdale.

The same green building criteria is used when selecting products throughout the house. There are many floor, countertop and tile products that are reused from other buildings or produced with an eye toward recycling and reduced emissions.

The longevity of the products and their maintenance requirements also plays into the "greenness" quotient. Kitchen cabinets that are designed to last for 30 years are considered "greener" than those that might last 10 years. This can reduce the amount of material going

into a landfill.

"Products that are easy to maintain and fix are also considered more green," DiCosola said.

Scratches to a solid surface countertop can be repaired, for example. "If I scratch granite, I can't repair it," DiCosola said.

Building green involves analyzing the environmental aspects of many materials and practices. Asking detailed questions about how the overall plan was put together should give you a good understanding of how green the building is.