

Up on the Green Roof

Especially in parts of the country where the sun shines brightly, and temperatures are high, “green” roofs can offer an environmentally friendly, durable, and cost-efficient alternative to conventional roof surfaces, providing a longer roof lifespan, greater acoustic insulation, lower heating and cooling costs, and reduced storm water runoff.

While green roofing was first applied to nonresidential buildings, homeowners are showing increasing interest in green roofs. Designs for green roofs vary greatly, with some involving vegetation grown on the roof’s surface and others consisting of ecologically friendly tiles or reflective materials. Many green roofs are installed on buildings with flat surfaces, but techniques for creating cooler and more energy efficient sloped roofs have also been developed.

Because they trap significantly less heat than asphalt shingles, while providing additional insulation, roofs constructed of high-quality green materials can lower both air conditioning and heating bills, as well as reduce wear and tear on HVAC systems. These roofs also last longer, as they are less prone to thermal degradation. For sloped roofs, tiles made of concrete, clay, or coated metal may serve as alternatives to shingles. These tiles, which come in different colors and styles, are installed over layers of waterproofing and insulation that help to regulate internal temperatures and protect against the weather.

Owners of homes and buildings with flat roofs may use reflective coatings or even create a rooftop garden that can also serve as an attractive spot for sunbathing and relaxation. Some cities are offering incentives for installing plant-covered roofs because of the advantages these roofs offer, including a reduction in the “heat island effect” for the surrounding area, noise absorption, improved air quality, lower energy usage, and reduced amounts of storm water discharge, which can pollute waterways. The absorption of rainwater by the roof also prevents water from gathering at the base of the structure.

Planting vegetation on roofs can, however, present certain challenges. Gardens are generally heavier than traditional materials, and proper waterproofing, filters, cover boards, and drainage are required. In some cases, structural reinforcement may be necessary before a roof garden can be planted on an existing roof, though it may be possible to lighten the weight load by using alternative plant growth media, such as pumice or lava rock. Depending on the types of vegetation chosen, roof gardens will need varying degrees of maintenance. To make watering during dry spells easier, some rooftop gardens have rainwater collectors and irrigation systems.

As word of this alternative spreads, growing numbers of urban and suburban residents may be drawn to the idea of creating a lush, ecologically friendly oasis away from the traffic and noise of the street that, in the long run, may well pay for itself. Green roofs can provide a wide range of public and private benefits to the environmentally minded homeowner.

Copyright © 2016 Liberty Publishing, Inc. All rights reserved Distributed by Financial Media Exchange