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Building with green guidelines has environmental and financial benefits. These guidelines produce structures that consume less energy, less water, and fewer, less wasteful construction materials, promoting the efficient use of resources and providing lower operating costs. Some certification program guidelines also focus on the human health aspects of buildings, improving indoor air quality by using fewer toxic compounds during the construction process.

While green building construction costs may be somewhat higher than those of traditional methods, they are offset by lower operation and maintenance costs over the life of the building and by the high demand for green buildings. The U.S. Green Building Council estimates that buildings constructed using the Leadership in Energy and Environmental Design (LEED) system have an 8 to 9 percent reduction in operating costs, a 7.5 percent increase in value, a 3.5 percent increase in occupancy, and a 3 percent increase in rent.

By employing a cradle-to-grave concept in building (considering at the planning phase that the building is a holistic working system with a defined lifespan at the planning phase), green building guidelines benefit the builder, property owner, and the environment.

Efficient Use of Resources. Green building guidelines consider the surrounding environment during the planning phase, encourage the reuse of construction materials, and reduce construction waste. Some guidelines reduce air pollution by encouraging the use of locally produced construction materials that are transported shorter distances and that promote the use of sustainable building materials produced from renewable resources.

Lower Water Consumption. According to the National Association of Homebuilders, a traditional home uses an average of 64 gallons of water per day indoors. A home built under green building protocols can reduce usage by 30 percent. Outdoor water usage can be reduced with the incorporation of native plants into landscaping plans.

Lower Energy Consumption. Green building guidelines address energy consumption during the construction phase as well as over the life of the building. These guidelines

consider the building as a whole system, including windows, ducts, vapor barriers, and the building envelope. The U.S. Green Building Council estimates that homes built using the LEED system are 30 to 60 percent more energy efficient than a traditional home.

Indoor Air Quality. With increasing incidence of asthma and allergies, indoor air quality is a high priority in the lives of many people. Compounds, materials, and chemicals used in traditional building construction emit contaminants that aggravate these health conditions, while green building guidelines promote the use of low-VOC (volatile organic compounds) paint, air filters, low- or nontoxic carpeting, and other materials.

For more information on green building practices, download ANR-1339: “Building Green: What Does it Mean” from the Alabama Cooperative Extension System website www.aces.edu