

**HOUSING ASSISTANCE COUNCIL
GREEN BUILDING TECHNIQUES**

Green Building Facet	Example
<i>Location and Linkages</i>	<ul style="list-style-type: none"> ◆ <i>Avoid environmentally sensitive sites.</i> Environmentally sensitive sites (e.g., wetlands, prime farmland) should be avoided due to ecological and human concerns (USGBC 2005). ◆ <i>Infill development.</i> Building new projects on already developed tracts of land saves resources by utilizing existing infrastructure. ◆ <i>Develop near public transportation and community resources.</i> Increased transportation options can increase resident accessibility, reduce transportation costs, and promote public health by incorporating walkable communities. ◆ <i>Compact development.</i> Compact development utilizes less land and makes public transportation more viable (USGBC 2005).
<i>Sustainable Sites</i>	<ul style="list-style-type: none"> ◆ <i>Minimize site impact during construction.</i> Minimizing the impact (e.g., protecting and reusing topsoil) of constructing a home helps lessen the building's footprint on the site (USGBC 2005). ◆ <i>Use permeable materials and surface water management techniques.</i> Utilizing permeable paving materials (e.g., grid pavers) can help minimize erosion and run-off from the site by allowing water to be absorbed more readily into the ground (USGBC 2005). ◆ <i>Utilize native plants for landscaping.</i> Native plants can be more cost effective since they require less watering (USGBC 2005). ◆ <i>Use non-toxic pest control.</i> Toxic pest control methods can be unhealthy for residents, particularly children (USGBC 2005).
<i>Water Efficiency</i>	<ul style="list-style-type: none"> ◆ <i>Install high efficiency toilets, showers, and faucets.</i> Low-flow water fixtures are important in green houses since faucets, showers, baths, and toilets can account for two-thirds of indoor water use (USGBC 2005, American Water Works Association 1999). ◆ <i>Reuse water.</i> Water reuse systems (e.g., rainwater harvesting systems, grey water systems) save water resources and reduce operating costs for residents. ◆ <i>Use water efficient irrigation systems, if necessary.</i> If needed, use water efficiency irrigation systems to save water resources and costs (USGBC 2005).
<i>Indoor Environmental Quality</i>	<ul style="list-style-type: none"> ◆ <i>Improve air filtration, distribution, and ventilation.</i> Installing and using airflow systems and exhaust fans will improve indoor air quality and resident health in the

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	<p>home by reducing humidity, pollutants, and odors (USGBC 2005).</p> <ul style="list-style-type: none"> ◆ <i>Reduce any potential exposure to radon and vehicle emissions.</i> Installing radon systems (if needed, based on region) and tightly sealing off garages will provide a healthier environment for residents (USGBC 2005).
Materials and Resources	<ul style="list-style-type: none"> ◆ <i>Build small homes and limit material use.</i> Home size continues to increase although smaller homes utilize less energy and materials (Figure 2). Limiting materials used for aesthetic purposes saves resources (USGBC 2005). ◆ <i>Use local sources for materials.</i> Utilizing local material suppliers reduces the amount of energy needed to deliver materials that are produced far away. Furthermore, supporting local business helps keep money in a local community by promoting horizontal economic linkages instead of vertical linkages that occur through franchised businesses. ◆ <i>Use environmentally preferable products.</i> Incorporating environmentally preferable products (e.g., low-VOC paints and carpets) in housing helps reduce the demand for virgin materials, improve the home's overall environmental performance, and increase demand for reused and recycled products (USGBC 2005). ◆ <i>Limit construction waste.</i> Reducing and recycling construction waste can reduce the substantial amount of waste caused by home construction (USGBC 2005).
Energy and Atmosphere	<ul style="list-style-type: none"> ◆ <i>Construct well-insulated homes.</i> Improved insulation regulates the loss of heat and assists in cooling, thus allowing residents to use fewer resources and save money (USGBC 2005). ◆ <i>Use energy efficient windows, lighting, water heaters, and appliances.</i> Energy efficient products can save resources and money, often in a very short period. The federal government rates energy efficient products through its ENERGY STAR program. ◆ <i>Use active and passive solar design systems.</i> Active solar design refers to the use of photovoltaic panels or other systems to produce energy for a house. Passive design strategies stress the importance of how the house is position in relation to the sun. ◆ <i>Check duct tightness.</i> Leaks in air ducts are a major source of energy loss, so it is important to test for any possible air leakage (USGBC 2005).
Homeowner Awareness	<ul style="list-style-type: none"> ◆ <i>Provide a homeowner's manual and walk-through of the</i>

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	<i>green home.</i> Providing a homeowner's manual, walk-through, and continuing education will help residents understand, effectively utilize, and maintain the various green facets in their home (USGBC 2005).

References

American Water Works Association. 1999. *Residential Water Use Summary*. Denver, CO: American Water Works Association.

United States Green Building Council (USGBC). 2005. *Rating System for Pilot Demonstration of LEED® for Homes Program, Version 1.72*. Washington, D.C.: United States Green Building Council.