A Planning Guide For

# New Homeowners

For Urban Areas

# Davidson County Conservation District

## *Selecting A Home Site*

***Nashville and Metropolitan Davidson County*** are approaching a population of 550,000 people. The surrounding areas consist of another one-half million people. As a result, housing starts exceeded the billion dollar mark for the sixth year in a row. In the last few years, Davidson County's land base has changed from agricultural to urban. Of the 325,000 acres, approximately 200,000 acres of land are now in urban and built-up areas. This kind of rapid urbanization places great demands on all our natural resources (soil, water, plants, animals and air).

*The mission of the Davidson County Conservation District* is to assist in the planning, developing, wise use, and preservation of our resources. The purpose of this publication is to help inform the public of resource considerations and information available when building or purchasing a new home. Building or buying a new home is the largest investment most families will make in their lifetime. They may spend months anxiously planning, purchasing land, selecting a site, developing a floor plan and estimating the costs. They believe they thought of everything. Then the unexpected happens – water in the basement, cracks in the walls, septic system failed. Their "dream house" becomes a nightmare.

A complete evaluation of your site and resources can help save you time, money and grief. Although it would take a site investigation by many professionals to determine all the questions you should ask about your site, this publication is provided to give you two things – a list of the most important resource questions you should ask and sources of information and professionals that can assist you.

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# *Know Your Soils*

**Soils, like people, have many different yet distinct characteristics.** Each soil type is different from others in depth, size and arrangement of particles, mineral composition, infiltration rates, available water holding capacity, mixture of living organisms (biodiversity), strength for building, structure; shrink-swell capacity, parent material and other. Yet in a soil series, a group of soils have profiles that are almost alike. Consideration should be given to above as well as below ground conditions. Home builders should be aware of wetness, water table, sand silt and clay content; depth to bedrock; position on the landscape; length and sternness of slope; underlying rock structure; topography and strength and stability to name a few. A published soil survey report of your county is available at your local soil conservation district office. *Information regarding soil interpretation data etc. are available in the Davidson County Conservation District Office.*

# Lawn Care

Establishment - Once construction has been completed, your focus may change to landscaping for erosion control and beautification. The first step may be the care of the lawn. Turfgrass establishment requires a commitment of time, energy and money for quality lawn. Some of the things to consider before starting are taking soil samples for testing; choosing between cool-season or warm-season grasses; consider soil type and condition; slope of the land; amount of sun and/or shade; type and amount of traffic to be encountered; pests and disease problems; desired turf texture and quality; water needs for irrigation; methods of planting; the financial investment you want to make and the planting season. Steps to take in preparation for planting are:

1. Remove all wood and woody vegetation, rocks, brush and debris.
2. Grade and fill land so that drainage is away from the building.
3. Use stockpiled or purchased topsoil for fill material and flower beds.
4. Prepare seedbed six to eight inches deep by tilling the soil.
5. Thoroughly mix soil, lime, and fertilizer according to soil test recommendations.
6. Plant seeds by drilling or broadcasting, covering them one-eighth to one-fourth inches deep.
7. Smooth and firm the soil by cultipacking or other roller-type methods.
8. Mulch with clean straw covering at least 50 percent of the soil surface.
9. Water the upper one-inch of soil two to three time's daily for two weeks or until seeds germinate and seedlings develop.

# Lawn Management

Manage turf grass by applying lime and fertilizer by soil test recommendations. *For the recommendations go to the free publication "Establishing a Lawn In Tennessee" at the UT Agricultural extension office in downtown Nashville.* Mow grass three to four inches in height to prolong the life, quality and quantity of your grass species. Control weeds by mowing and treating with recommended chemical herbicides (follow label directions). Irrigate with water as needed (soak six to eight inches deep each time). Aerate with core aeration equipment as needed. Control insects and pests as needed.

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# Soil & Ground Related Problems

**Topography of the Land** - Home builders should consider the topographic position of the house in relation to the surrounding landscape. The topography of an area shows surface features such as hills, valleys, lakes, roads, rivers and streams. ***Karst topography is land forms such as hills, valleys, underlain by soluble limestone that dissolve, forming numerous depressions or basins that allow rainwater to percolate through cracks dissolving the rock below.*** The honeycomb nature of Karst terrain results in very high pollution potential because surface water and streams entering sinkholes, caves and caverns, bypass the natural filtration through the soil. *Topo maps that help identify Karst topography, landscapes or terrain are available at the soil conservation office.*

# Flood Plains

Communities participating in the **National Flood Insurance Program (NFIP)** have flood hazard data for floodplain management and flood insurance purposes. The NFIP study includes a boundary map for sound plain management measures. The 100-year flood has been adopted by Federal Emergency Management Association (FEMA) as the base flood for floodplain management practices. *Flood Insurance Rate Maps (FIRM) are available at the soil conservation district office.*

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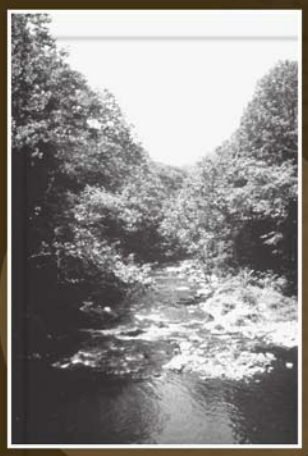
# Barriers For Unsightly Areas

***Buffer strips*** are areas of land that are maintained in permanent vegetation designed to intercept pollutants, improve water quality and enrich aesthetics. They help reduce noise, odors and chemical pollutants as well as serving as barriers for unsightly objects or areas.

***Riparian Forest Buffers*** are areas along streams consisting of trees, shrubs and grasses that intercept pollutants from both surface and groundwater before they reach a stream. They provide benefits such as food and cover for birds, butterflies, beneficial insects, bats and other wildlife; prevent streambank erosion; filter runoff and absorb nutrients; provide shade to cool water for aquatic life and improve overall the quality of the water and environment.



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