

Madison County Shrink Swell Soils Policy

In accordance with the policy set by Madison County effective January 13, 2004 and required by the Virginia Uniform Statewide Building Code in reference to the International Residential Code, Section R401.4, one and two family dwelling sites will be evaluated for shrink-swell soils.

Soils Classifications

Madison County has used the United States Department of Agriculture soil survey maps to identify soils with shrink-swell potential. Based on a weighted average of the linear extensibility for the soil classification, soils are considered low, moderate or severe as recommended to the county by Natural Resources Conservation Service. Soils with a linear extensibility from 0 to below 3 are low, 3 to below 6 are moderate and 6 to 30 are severe.

Soil Maps

The USDA soil survey has been used to map the moderate and severe soil classes within the county. A green color is used to map soils with a linear extensibility of 3. A yellow color used to map those soils above 3 to below 6 and a red color for those above 6.

Soil Test

A house site will be evaluated with the soils map to determine if the building site is located within 500 feet of any potential shrink-swell soils. If a site is within 500' of the green the Permittee may place the footing a minimum of 24 inches below grade without being required to have a site specific soils investigation prepared by a soil scientist. If a site is within 500' of the yellow or red a soils investigation will be required.

The Permittee has the option of assuming that potential shrink-swell soils are located on the site and having the footing/foundation designed by a licensed professional to overcome the limitations presented by these soils. Additions, accessory structures and decks where no indications of shrink-swell conditions exist are exempt from this requirement.

Example



NOTICE

The Virginia Uniform Statewide Building Code in reference to the 2000 International Residential Code, Section R401.4, requires a shrink-swell soil policy for new one and two family dwellings.

MADISON COUNTY SHRINK-SWELL SOILS POLICY FOR NEW ONE AND TWO FAMILY DWELLINGS AND ADDITIONS ARE AS FOLLOWS:

All properties being developed for one and two family dwellings shall be checked for the presence of shrink-swell soils as a regular part of the building permit application process. This soils check, performed in the Building Official's office, shall be accomplished by locating the property in question on the applicable soils map in the "Soils Survey of Madison County" and identifying all soils with significant (high) and/or (moderate) shrink-swell potential within 500 feet of the building site. When this soils check indicates the presence of significant (high) and/or (moderate) shrink-swell potential soils, the permit applicant shall be responsible for providing the Building Official's office with a Site Specific Soils Investigation prepared by a Certified Soil Scientist or Geotechnical Engineer. Soil testing shall be in accordance with Section R403.1.8.1. When the soil investigation confirms the presence of expansive soil at the site of the proposed construction, the permit applicant shall then provide the Building Official with a footing/foundation plan, in accordance with Section R403.1.8, designed by a licensed professional engineer to overcome the limitations presented by these soils. Footing/foundation design shall meet or exceed requirements of the International Residential Code. These actions shall be taken prior to issuance of the building permit.

The Madison County Shrink-Swell Soil Policy will include the option for the builder or homeowner to assume (high) and/or (moderate) potential shrink-swell soils on site, rather than have a test of its soil prepared by a Certified Soil Scientist or Geotechnical Engineer. The permit applicant shall then be responsible for providing the Building Official with a footing/foundation plan designed by a licensed engineer to overcome the limitations presented by these soils.

Exception: For additions to one and two family dwellings or slab-on-grade accessory structures and decks where there is no indication of a shrink-swell condition for the area.

Property owners, builders, developers, buyers, etc. may come into the Zoning and Building Office to locate their property on the tax map for shrink-swell and type of soil.

If you have any questions about this policy, feel free to contact the Building Official at the Zoning and Building Office at (540)948-6102.

This policy will be effective January 13, 2004.