



CITY OF ARTESIA **PERMITS & INSPECTIONS**

A Division of the Planning Department

Policy for Residential Foundations

Artesia is known to have expansive soils. This has resulted in problems, primarily for homeowners, with cracking or heaving foundations.

Expansive clay soils repeatedly swell and shrink with each cycle of wetting and drying. Hydrocompactive soils, which are typically found in flood plains, on the other hand, lose strength and collapse only once when wetted to a particular depth.

The Planning Department recognizes that geotechnical testing for individual residences can be costly and time consuming. Further, once test results are obtained, most likely an engineered foundation would then be required.

Non-structural approaches to foundation design involve controlling water around the house:

- Building codes require a minimum 6-inch-in-10-foot slope in grade from the house outward in all directions, with certain exceptions
- In addition, the City of Artesia will require leak testing of all plumbing piping prior to pouring the slab and at the topout inspection.

Homeowners are also strongly encouraged to provide one or all of the following remedies:

- Gutters and downspouts connected to underground drains to carry water away from the foundation
- Xeriscape landscaping around the house
- A 3 foot concrete mow strip around the entire foundation

Structural approaches to foundation design can, of course, vary. Contractors can elect to submit a geotechnical report and engineered foundation design with the permit plans. In lieu of an engineered design, the City of Artesia now requires the following:

- Native soils removed to a depth of 24” (from top of finished building pad) and compacted to 95% compaction; if pad is required to be raised, all fill dirt is to be compacted to 95% compaction with structural fill. In both cases the top 8” shall be structural fill.
- Monolithically poured slabs with a rebar mat of either #3 at 18 inches or #4 at 24 inches on center both ways, on chairs
- Perimeter footings 18 inches wide, with a depth of 24 inches (30” minimum from top of slab). Rebar required is 2 - #4 both top and bottom (4 total).

Alternative foundations may be considered; obtain approval from the Building Official prior to submittal of plans.

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