

Expansive Soils and Foundations: Soil/Structure Interaction and Structural Issues

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Foundations and slabs constructed on expansive soils require special attention. Although geotechnical testing has been performed and supplied to the structural engineer, unexpected movements of the soil supported foundations and slabs can occur.

In instances:

The allowable and expected movements of a foundation identified by the geotechnical engineer are different from that interpreted by the structural engineer and/or architect.

The design standards utilized by the structural engineer are inaccurate and/or are not truly applicable to the structure being designed.

The contractor deviates from the construction specifications or site conditions differ from that expected.

Repairs are performed to a foundation that further detriment the foundation rather than improve its condition.

Methods are readily available to measure movements of foundations; however, simply relying on the measurements without full documentation can result in misinterpretation.

In summary, multiple factors can cause movements of soil supported foundations and slabs.

If you have any questions, please contact [Dr. C.Vipulanandan](#)
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