

ENVIRONMENTAL SOIL STABILIZATION, L.L.C.

"Your Soil Stabilization Specialists"

"In both Richardson and Las Colinas the soils have a PI of over 40. All soils movement was successfully arrested and these properties have performed wonderfully to date. The Las Colinas property is over 4 years old now. The best thing about the chemical injection process besides the non-movement of the soil and the fact that I can plant landscape materials in the soil without them being killed by the old lime slurry residue is that it is far more cost effective than lime."

*-David R. Cunningham
Director of Development
Granite Properties*

"We have successfully used this treatment for eight years. This process permits us to enhance the quality of our roadway construction and has saved a good deal of money. We used this chemical on 46 miles of roadway."

*-Ron Harmon
County Commissioner, Precinct 2
Johnson County, Texas*

"On numerous occasions over the past 3 1/2 years, our precinct has been using the product EcSS 3000™. It has proven itself to be an innovative and reliable soil stabilizer. With over 25 miles of processed road in which EcSS 3000™ was used, these roads were heavily travelled by not only automobiles but also mobile homes, trash trucks and construction vehicles...proven itself to be the cutting edge of soil stabilization. We would recommend EcSS 3000™ to anyone considering a soil stabilization product...the tax savings are 80%."

*-Jim Faver
Supervisor, Precinct 3
Johnson County, Texas*

"The chemical, EcSS 3000™, provided to stabilize our soil is performing beautifully. After 4 years, our building at 1351 E. Bardin Road in Arlington is not moving or cracking. Our concrete parking lot is also not cracking...our soil tested a potential of nine-inch expansion before treating. We saved thousands of dollars..."

-Jack F. Paul

E.S.S.L.

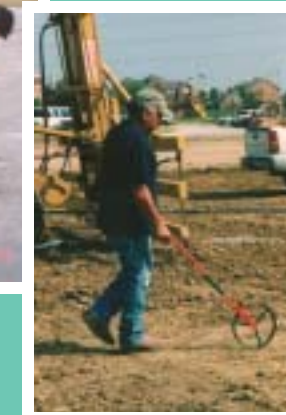
Environmental Soil Stabilization, L.L.C.

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THE PROBLEM - Expansive Clay Soils

Highly expansive clay materials shrink and swell due to changes in moisture content. Moisture fluctuations can be caused by seasonal rain fall or human activities such as irrigation or leaking pipes. This shrinking and swelling can translate into several inches of movement on the surface.

Roads, parking lots, homes, industrial and commercial buildings and swimming pools built on expansive clay materials often sustain expensive damage as a result of soil movement.



THE SOLUTION - Chemical Stabilization

Chemical Stabilization Treatment utilizing EcSS 3000™ reduces the swell potential of expansive clay materials, preventing damage to overlaying structures. It has proven effective under airport taxiways, roads, parking lots, swimming pools, residential, industrial and commercial buildings.



Specialized equipment injects the "Stabilizing Solution" under pressure into expansive materials in place.

Injection unit shown on right is capable of injecting 30,000 square feet per day to a depth of 7 feet.



COSTS LESS

Chemical Stabilization Injection stabilizes expansive clay soils for a fraction of alternative construction methods. The key to cost savings is the ability to stabilize expansive material in place.

Chemical Stabilization especially cost effective for treatment of expansive soils under existing structures. Traditional fixes are costly and intrusive such as concrete cut off walls and aprons.

Chemical Stabilization gives you more for less money. Typical injections under foundations are made seven feet deep and effectively stabilize the entire zone of active soil.

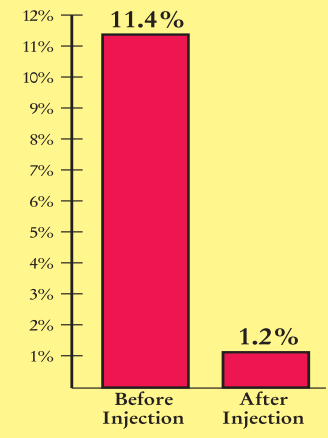


PROVEN EFFECTIVE

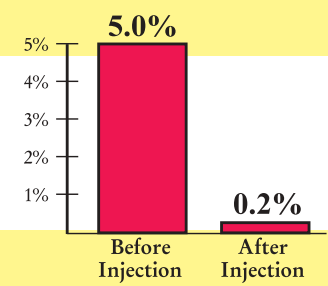
Chemical Stabilization has been utilized on hundreds of projects covering over 30 million square feet.

SWELL POTENTIAL

Testing method ASTM D 4546, Method B



Cedar Hill, Texas



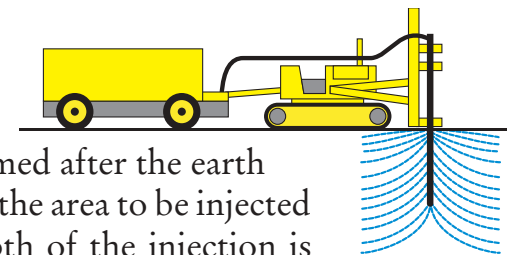
Arlington, Texas

An average swell potential of 1-2 percent is the criteria for typical injection specifications for building pads.



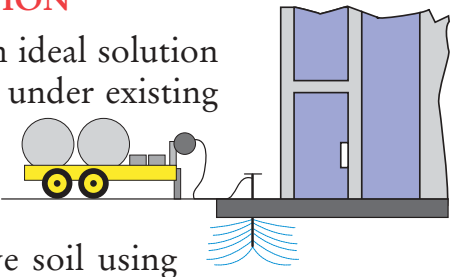
NEW CONSTRUCTION

Stabilization should be performed after the earth work has been completed, and the area to be injected compacted to grade. The depth of the injection is determined by soil conditions and project requirements (typically 2 - 10 feet).



REMEDIAL STABILIZATION

Chemical Stabilization is an ideal solution to stop expansive clay movement under existing structures. Small holes are drilled through the structure (foundation, road, runway, etc.) and the solution is injected into the expansive soil using hand held injection rods.



HOW CHEMICAL STABILIZATION WORKS

The main cause of expansion in clay soils is the tendency of individual soil particles to attract and hold water. Clay particles have a net negative electrical charge and attract positively charged ions present in the soil-water matrix. In the attempt to attract positive ions, many layers of water molecules are held by the clay particles. These layers of adsorbed water force individual clay particles away from each other resulting in soil expansion.

Chemical Stabilization creates a cation rich environment in the injected zone. The individual clay particle's negative charge is reduced and its tendency to attract and hold water is greatly reduced. The injection zone will exhibit minimal swell after the treatment.