

CASE STUDY

Eagle Crest

North Irving, TX



Situation: Eagle Crest is a group of multi-family properties located in North Irving, Texas. This is an area near the DFW Airport and close to the high end development of Las Colinas. North Irving is on the Eagle Ford geological formation. These soils have an extremely volatile shrink swell potential when any change in soil moisture content is introduced. The property is approximately twenty years old and still in good shape. We have no history on this property and no specific geotechnical information.

Solution: To be certain that the water drains downhill and away from the building foundations, all top soil to at least 12" should be removed from the site except if used for landscaping. The top 3-4 feet of all soils should be homogenously mixed, graded to the desired elevation and compacted in 6" lifts. In order to achieve proper compaction, there needs to be a geotechnical engineer employed on site to insure that each of the soil layers is compacted to proper density. Weights added to the compactor or taken off the compactor as well as regulating tire pressure will control the amount of energy used to consolidate each lift. When the rains come and the irrigation system is turned on, the soils begin to swell and the foundation heaves up.

Conclusion: The lift on the 60 ft. by 150 ft. building was accomplished with 135 hydraulic jacking systems while being carefully raised. During the lifting process elevations were carefully monitored and documented after each selective lift phase. The differential elevations were corrected within 2 inches across the entire building.

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