

Lightweight Aggregate Resolves Louisiana Home Settling Issues

Engineers and contractors combined talents recently in New Orleans to challenge coastal Louisiana's age-old issue of land settlement for one distressed homeowner in the historic English Turn community.

As specified by Andre Monnot with Principal Engineering, Burlette Services, pumped Riverlite® aggregate under the homeowner's house to correct several feet of settlement which had occurred over a four-year period.

Structurally, the house was in good shape because it was built on pilings. The lightweight fill under the house was needed to fill the space created by settlement of the existing soil. However, this was small part of the total project. After removing an extensive concrete paver driveway and walkways and a couple of feet of base and subbase material, Riverlite® was added with the use of a front-end loader to a depth of approximately two feet. Friction pilings and a concrete base were also added where concrete pavers were to be re-installed.

Riverlite® lightweight sand was used in place of traditional sand because it is much lighter and because it will not consolidate like normal fill or other sand. Riverlite® is an expanded clay lightweight aggregate. It is made from selective clays mined and fired in a rotary kiln to 2,000 degrees Fahrenheit. The end product of this process is a high quality lightweight aggregate that is inert, durable, stable and free draining.

Jeff Speck, P.E FACI, Trinity Lightweight stated that Riverlite® is perfect for the unstable Louisiana soil structure. "It is less than half the density of normal weight material. When you remove, in this case, approximately two feet of normal weight material and replace it with Riverlite®, you greatly reduce the vertical load. The goal, in this type situation, whether it is a driveway, walkway, home or larger project, is to achieve zero net weight impact on the underlying soil. Riverlite® allows you to do this."

Ray Burlette, of Burlette Services, is a first time user of Riverlite® and could not have been happier with the product. "We pumped Riverlite® mixed with water under the house. I couldn't believe how seamlessly the product flowed," says Burlette. Riverlite®, because of its lower weight, traveled faster, smoother, and more efficiently than normal sand. "More importantly for the homeowner, it will offer a more permanent solution."



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