# Soil Stabilization: A LEANER, GREENER AND STRONGER BASE

REDUCE WASTE, INCREASE EFFICIENCY, AND BENEFIT FROM A LONG-LASTING, STABLE FOUNDATION

RUSTON

THIS STREAMLINED, COST EFFECTIVE METHOD modifies and improves the engineering properties of soil thereby increasing its overall load-bearing capacity.

The result is an extremely durable yet economical base for pavements and buildings.

Applications include:

- Parking Areas
- Building Pads
- Loading Docks
- Roads and Streets
- Storage Areas
- Athletic Surfaces
- Airports



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## **DON'T START FROM SCRATCH!** SOIL STABILIZATION PRODUCES A RESILIENT SUBGRADE OR BASE FROM EXISTING, ON-SITE MATERIALS

#### **A SMARTER OPTION**

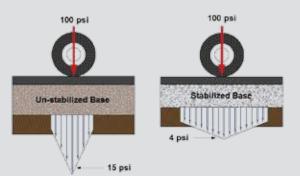
Not all site improvements require high-grade (and high-cost) materials. In fact, soil stabilization using additives such as a calcium-based stabilizer creates a structurally sound, solid foundation utilizing existing materials. Unsuitable materials such as sand, clay, deteriorated pavement and so-called "waste" or industrial by-products, such as foundry sands and gravel pit screenings can be improved on site. The end result delivers a superior subgrade or base that actually strengthens with time and outperforms new imported granular materials.

#### **SUSTAINABLE**

In most situations, the material required for soil stabilization is already on site and re-usable. Because hauling is reduced, fuel consumption and emissions are controlled and environmental impact is lessened.

#### **LEAN PROCESS**

Soil stabilization is a faster, more streamlined way to acquire a structurally sound subgrade or base. Required time and materials are minimized at every step. Materials remain on site and time is reduced by eliminating the need to excavate and export unsuitable soils. Similarly, there is no time or expense needed to import and install new granular products.



#### **EXTENDED LIFE CYCLE**

Unlike granular bases, chemically-modified soils (CMS) create a rigid, slab-like structure that distributes weight over a broader area, which reduces the disturbance of underlying untreated soils. CMS is more resistant to freeze/thaw damage and cracking. This water resilient solution results in a longer life cycle, thereby lowering long term costs.



## HOW IT WORKS

#### Step 1: Testing

When requested, lab tests can analyze the soil selected for the project and a custom combination of soil depth, calcium-based stabilizer and water is designed to meet the load-bearing capacity required for the use of the site.

#### Step 2: Spread/Mixing

In most cases, the soil used is on site so the proper quantity of calcium-based stabilizer is applied onto the surface with a calibrated spreader. Then, in one step, a reclaimer/stabilizer blends the soil, calcium-based stabilizer and the optimum amount of water to the required depth.

#### Step 3: Compaction/Curing

The blended soil is then compacted using vibratory rollers. Once hardened, the chemically-modified soil (CMS) does not compact further under traffic and is resistant to settling. This results in a ready-to-use, durable subgrade or base.

#### Step 4: Construction

The entire soil stabilization process can be completed over large areas in one day. From there, further construction operations can then continue on top of the improved surface.

