

GEOPIER®

ARMORPACT® SYSTEM Rigid Inclusion Technology



The Armorpack® system is Geopier's solution to soil profiles with relatively thick layers of soft clay or organic soils (10 to 15 feet thick). This system uses a patented HDPE sleeve to provide added confinement to the pier and prevent bulging of the aggregate into the very weak matrix soils. The sleeves are installed using a specialty Rampact mandrel that fits inside the Armorpack sleeve. During installation, the sleeve is advanced through the weak soils (to tag competent bearing soils) and the pier is then constructed inside (and above) the sleeve like a typical Rampact displacement pier up to the ground surface. The end result is a dense column of aggregate confined within an HDPE shell that provides excellent stiffness and settlement control.

APPLICABLE SOIL TYPES

- Organic soils or very soft clays and silts

DESIGN CONSIDERATIONS

- Can be used for any Geopier® application
- Can be installed to depths of 25+ feet
- Ideal for typical settlement tolerances (1 inch total; ½ inch differential)
- Foundations can be designed as conventional spread footings with Typical bearing pressures of 3 to 6 ksf
- Slabs can be constructed as conventional slab-on-grade

CONSTRUCTION CONSIDERATIONS

- No spoils/haul-off – ideal for environmentally impacted sites
- Often results in 20% to 50% cost savings compared to traditional alternatives (removal and replacement and deep foundations)
- Rapid installation process means shorter construction schedules

INSTALLATION PROCESS

Geopier's Armorpack installation process consists of the following:

- Step 1: Advance the Armorpack sleeve to the design depth using the Rampact displacement mandrel.
- Step 2: Withdraw the mandrel to allow open-graded aggregate to flow into the sleeve.
- Step 3: Redrive the mandrel to densify the recently placed aggregate.
- Step 4: Repeat steps 2 and 3 to construct a dense column of aggregate in 2-foot-thick lifts to the ground surface.



Watch system installation videos at www.geopier.com

Whether you are an engineer, contractor, or owner - We can help.

For more information on Geopier solutions, call **800-371-7470**, visit www.geopier.com or email info@geopier.com

