GEOPIER®
A Division of CMC

dX1 SYSTEM
Rammed Aggregate Pier® Technology

Displacement X1 piers (dX1) leverage the speed and versatility of the X1® drilled solution while simultaneously removing the fuss of predrilling and spoil removal. dX1 piers are installed by displacing through unsuitable bearing soils to a desired design depth and then building a high-quality pier element using aggregate or even the in-situ sand in the case of a clean sand profile. The end result is a dense column of aggregate or sand surrounded by stiffened/densified matrix soils that provide excellent settlement control and allow for higher bearing pressures.

APPLICABLE SOIL TYPES

- Sands, clays, silts, and undocumented fills
- Liquefiable soils

DESIGN CONSIDERATIONS

- Can be used for any Geopier application
- Can be installed to depths of 55+ feet
- Great for mitigating liquefaction-induced settlements
- Ideal for static settlement control
- Foundations can be designed as conventional spread footings with typical bearing pressures of 3 to 8 ksf
- Slabs can be constructed as conventional slab-on-grade
- Can be used for uplift and lateral resistance

CONSTRUCTION CONSIDERATIONS

- Eliminates the need for casing and the associated cost and schedule
- 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

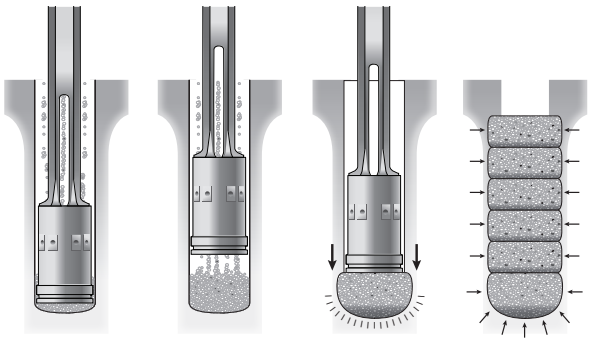
Geopier's dX1 piers are installed as follows:

Step 1: Advance the displacement mandrel through unsuitable soils to the desired design depth.

Step 2: Withdraw the mandrel several feet to allow open-graded aggregate to flow into the annular space.

Step 3: Redrive the mandrel to densify the recently placed aggregate and surrounding soils.

Step 4: Repeat steps 2 and 3 to construct a dense column of aggregate in 2 to 4 foot thick lifts to the ground surface.



Watch system installation videos at www.geopier.com

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