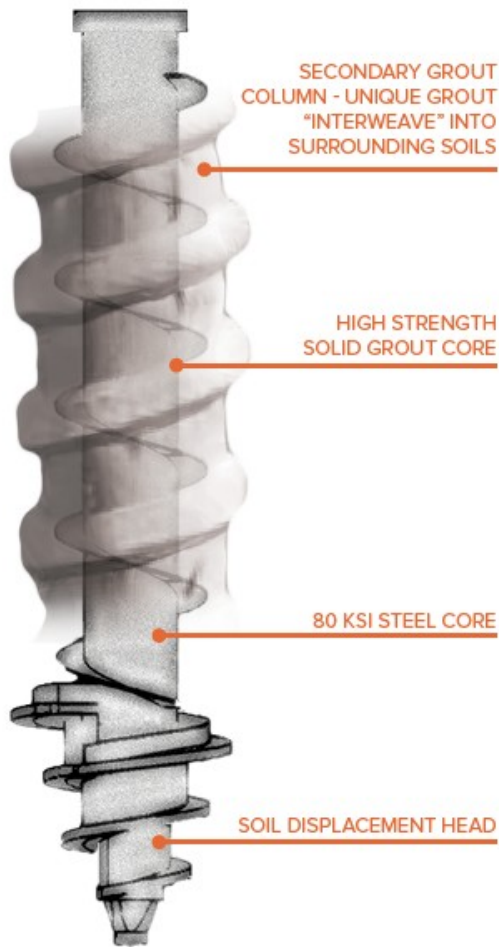


DRILLED-IN DISPLACEMENT MICROPILE OVERVIEW



The DDM is generally designed and installed as a Micropile in accordance with the IBC 2009-2012 Building Codes. A new, full-length steel core is installed and left in the ground, ensuring unbroken structural integrity and providing a grout-filled steel core shaft for excellent tension, lateral and cyclic load capacities. The DDM lead section includes a helicoidal driving plate, a lateral displacement plate and a secondary deformation structure. The drive plate helps advance the pile downward with no vibration and provides end-bearing support as needed. The lateral displacement plate creates a positive annulus around the steel core by displacing the soil outward. The secondary deformation structure creates an outer ribbing on the grout column making it like a screw shaft. This further enhances the bond with the densified soil. No spoils are created. A reverse auger welded to the steel core draws the grout into the annulus created by the displacement head. The reverse auger flight, which is welded along the length of the pile, ensures both a continuous grout column and structural load transfer from the grout column into the 80 ksi steel core. Grout ports in the steel core also provide consistent grout placement along the length of the pile.

The full-length, grout-filled steel core transmits the axial compression and tension loads to the DDM pile cap. The combination of a large outer-diameter grout column and inner grout-filled steel core provides excellent lateral load capacity. The outer-ribbed grout column in the densified soil provides side friction. The drive plate enables the DDM piles to penetrate the soil and can provide end-bearing capacity.

