Displacement Piles

Auger Displacement piles are similar to Auger-Cast Piles but instead of a continuous auger flight, the specialized screw shaped auger displaces the soils laterally toward the bore hole walls to increase the density of the surrounding soils and increase the capacity of the resulting pile. An added benefit of the displacement pile is that there are essentially no drill spoils generated by the installation process of a displacement pile. Aside from reducing the cost of spoils handling, the lack of spoils is even more significant for projects with contaminated soils. Displacement piles offer a cost saving approach and reduce the hazards of handling contaminated soils.

As the specialized auger drills, the soil is laterally displaced until tip of pile elevation is reached. High slump sand mix grout/concrete is then pumped out through the hollow stem auger as the tool is withdrawn from the bottom of the drill hole. After grouting of the pile is complete, a reinforcement cage is installed. The inherent soil improvement process of displacement pile installation results in greater lateral capacities compared to conventional in-situ piles. Displacement piles also offer a low-noise, vibration free installation process. A huge advantage of this is where deep foundation support is needed in sensitive areas where noise and vibrations are not allowed. Vibration or pile driving in areas of sensitive soils can cause settlement which can lead to project delays or claims.

For more information on the cost saving, design/build options, and environmental benefits that CJA’s expertise on displacement piles can offer your project, please contact our nearest office location.