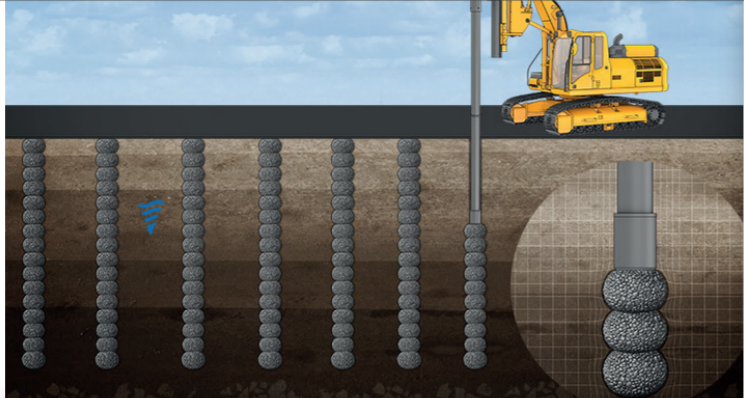






Technique	 Column Supported Embankment	 Deep Soil Mixing	 Overexcavate and Replace	 Surcharge Embankment with Geogrid	 Tensar STRATUM™ System
Mechanism	Densification / Bypass soft soil / Improved Drainage	Cementation	Full removal and replace of soft soil	Stablized platform / Soil Consolidation	Stablized platform / Stiffness / Soil Consolidation
Settlement Control	<ul style="list-style-type: none"> • Small total settlement if bypass soft soil to very stiff/dense layer • Typically required bridging platform with geogrid to control differential settlement between columns 	<ul style="list-style-type: none"> • Small total settlement and differential depending on mix, depth and spacing 	<ul style="list-style-type: none"> • Small total and differential settlement if undercut to very stiff/dense layer 	<ul style="list-style-type: none"> • Some mitigation of differential settlement • No control of total settlement 	<ul style="list-style-type: none"> • Even and controlled total and differential settlement • Slight reduction of total settlement
Constructability	<ul style="list-style-type: none"> • Required specialty installer and equipments • Time consuming to install • Most likely require stabilized platform for access 	<ul style="list-style-type: none"> • Required specialty installer and equipments • Time consuming to install 	<ul style="list-style-type: none"> • Most likely require stabilized platform for access • Require space for side slope or vertical support structure for excavation • Difficult to do with high groundwater • Not suitable in soil strata with cobbles and boulders 	<ul style="list-style-type: none"> • Easy to construct; no specialty equipment or installer required • Wait time required for staged construction • Allow steeper side slope and reduce footprint of embankment with geogrid reinforced side slopes 	<ul style="list-style-type: none"> • No time-consuming and costly site preparation • Relatively easy to construct and no specialty equipment or installer required • Eliminate or allow larger lift for stage construction • Allow steeper side slope and reduce footprint of embankment
Overall Cost	Expensive	Expensive	Varies depending on depth, local fill availability, region & disposal requirements	Low	Moderate
Environmental Impact	Low to moderate	Alter groundwater conditions	Very high	No Impact / Recycled aggregate fill allowed	No Impact / Recycled aggregate fill allowed

WHATEVER YOUR PROJECT, WE CAN HELP

Tensar International is a manufacturer of proven geosynthetic products and full provider of engineering services. Backed by extensive research and thoroughly tested, Tensar's world-renowned geogrid products have set the industry standard. We help engineers, contractors and owners use geogrid to achieve more cost-effective, reliable solutions for soil stabilization, earth reinforcement, and other site development challenges.

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