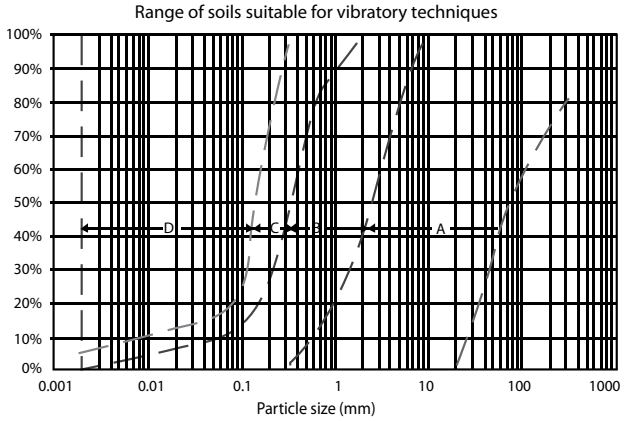
- Range of soil (particle size-sieve analysis) suitable for vibratory techniques are zoned in Fig. (1.19) Indicating the best improvement technique suitable for such soil. Fig. (1.20) Shows the most suitable techniques for both cohesive and granular soils.
- The prices per cubic meters of the treated soil with respect to depth for surface compaction, dynamic compaction and deep vibro compaction are presented in Fig. (1.21) to ease the decision for the proposed improvement technique with respect to cost for granular soils



Zone A: The soils of this zone are very well compactable.

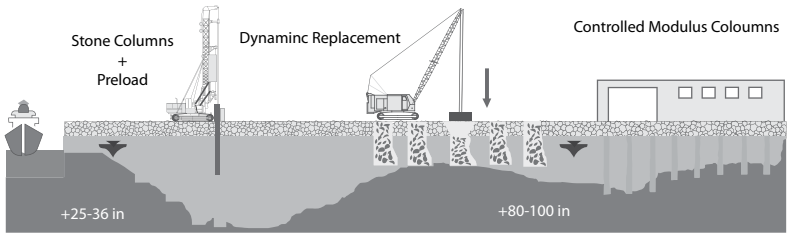
The right borderline indicates an empirically found limit where the amount of cobbles and boulders prevents compaction because the vibroprobe cannot reach the compaction depth.

Zone B: The soils in this zone are suited for Vibro Compaction. They have a fines content of less than 10%.

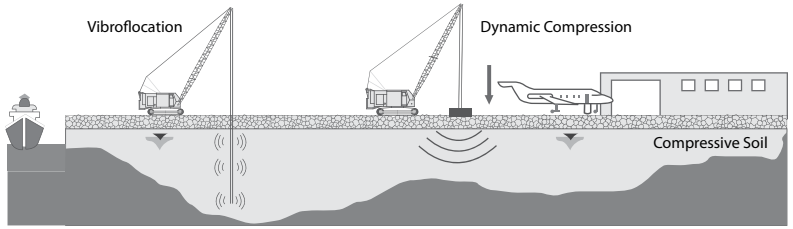
Zone C: Compaction is only possible by adding suitable backfill (Material from zones A or B) from the surface (stone columns or sand columns).

Zone D: Stone columns are a solution for a foundation in these soils. There is a resulting increase in bearing capacity and reduction on total and differential

Fig. (1.19): Range of Soils Suitable for Vibratory Techniques



COHESIVE SOILS: Clays, Sites, Peats



GRANULAR SOILS: Gravel, Sand, Fill

Fig. (1.20): The Most Suitable Improvement Techniques for both Cohesive and Granular soils

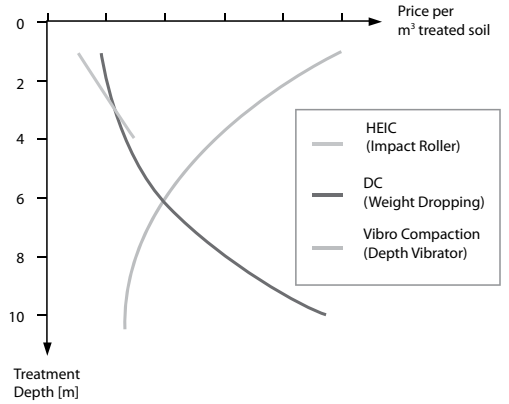


Fig. (1.21): Cost Comparison for the Different Improvement Techniques for Granular Soils