

- Surface manifestation.
- Lateral spreading or land sliding.
- Loss of bearing capacity for shallow foundation.
- Loss of lateral soil stiffness

1.4 SOIL IMPROVEMENT GUIDELINES

1.4.1 Soil liquefaction improvement techniques may be characterized as densification, drainage, reinforcement, mixing, replacement, Vibro Compaction, Vibro replacement (Vibro Stone Columns), deep dynamic compaction and compaction jet grouting.

- Wick drains, Fig. (1.16), are also an accepted technique whenever a permanent dewatering is provided. However, the use of this technique should be evaluated with extreme caution.
- Fig. (1.17) Shows the method statement of the dynamic compaction and in Fig. (1.18) Comparison between dynamic and vibro compaction is presented with respect to tip resistance along depth.

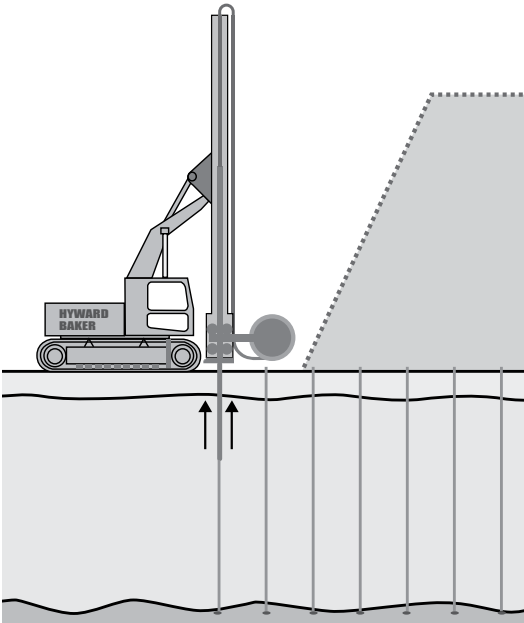


Fig. (1.16): Wick Drains Technique

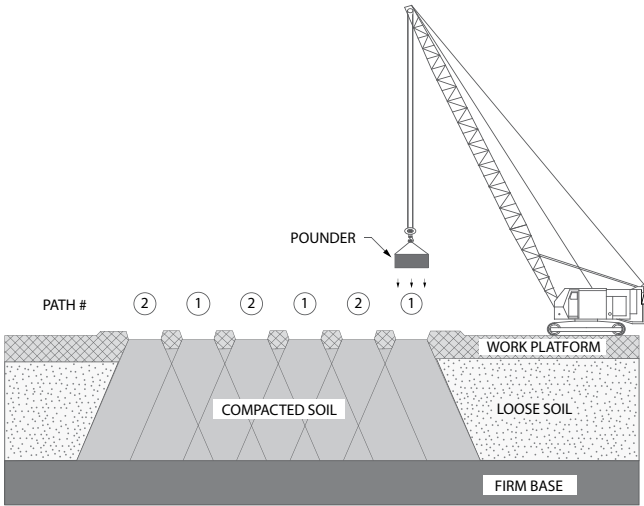


Fig. (1.17): Method Statement of Dynamic Compaction

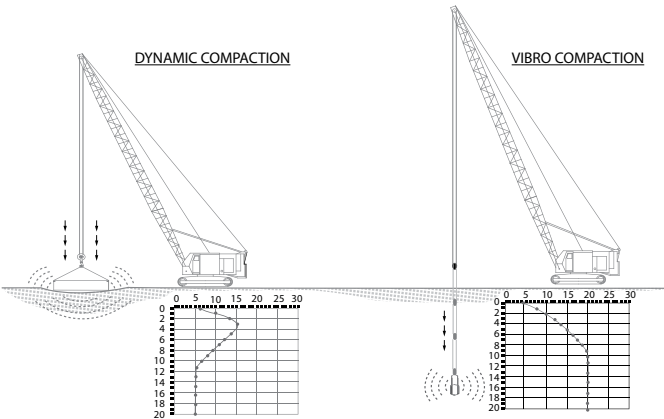


Fig. (1.18): Comparison between Dynamic & Vibro Compaction