

Aerial view of a corner of Rokko Island. The light-colored material on the paved surface (lower left corner) is sand that boiled to the surface as a consequence of liquefaction. The island is ringed with large gravity caisson "quay" walls, and the surrounding water is about 15 m deep.



A closer view of the collapsed crane (also visible in the previous photo). The quay wall has displaced outwards and a graben (depression) has formed behind it. The cranes had their legs spread apart, causing buckling and yielding, and collapse in this case. A series of yellow trucks were caught in the graben.

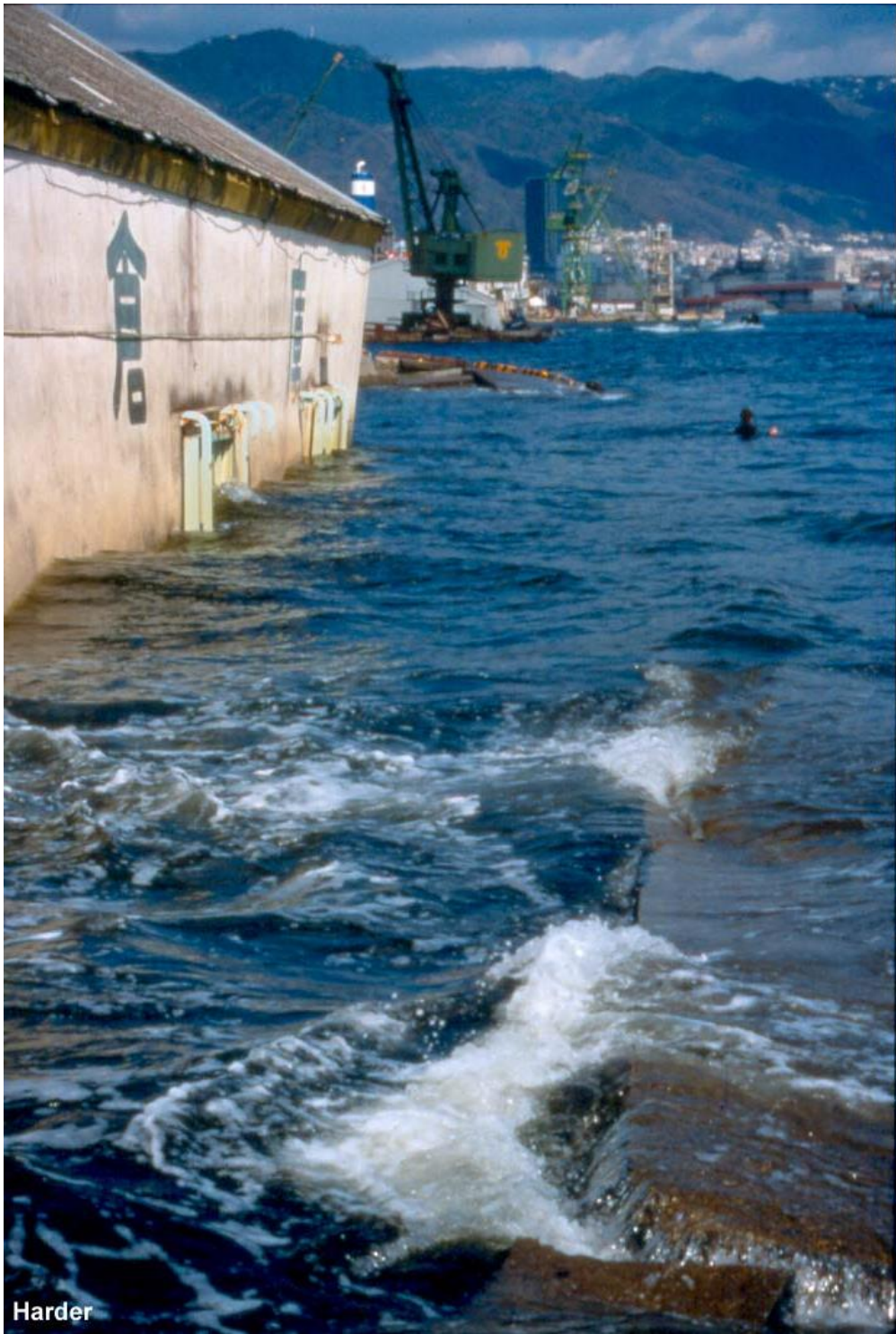


A view of the graben from the top of the quay wall. The collapsed crane is visible in the background. The rear legs of the two closest cranes are locally buckled and off their rails.



This car ramp at a ferry terminal collapsed when the fill materials liquefied and the quay wall displaced outwards. The graben behind the quay walls is filled with water.





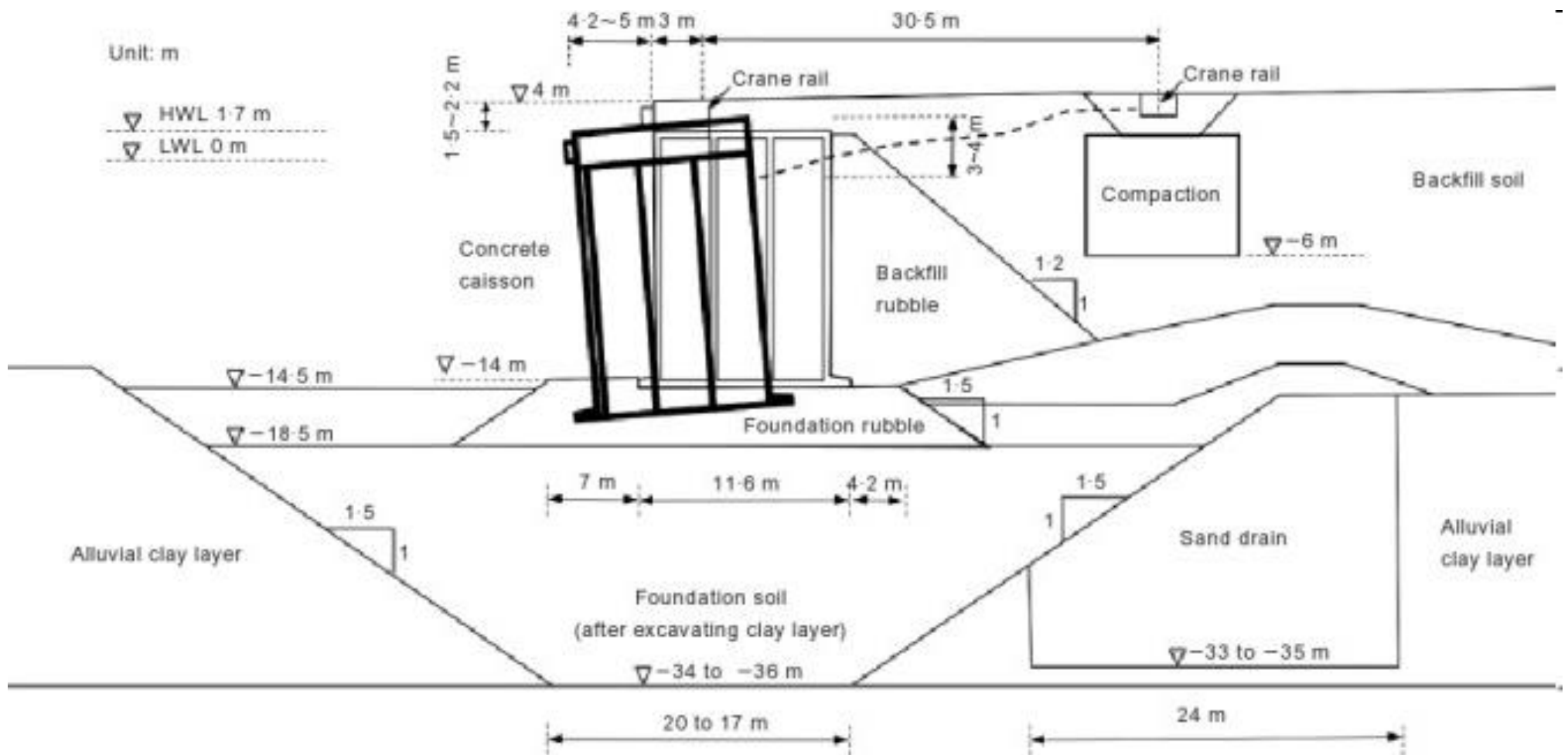
Harder

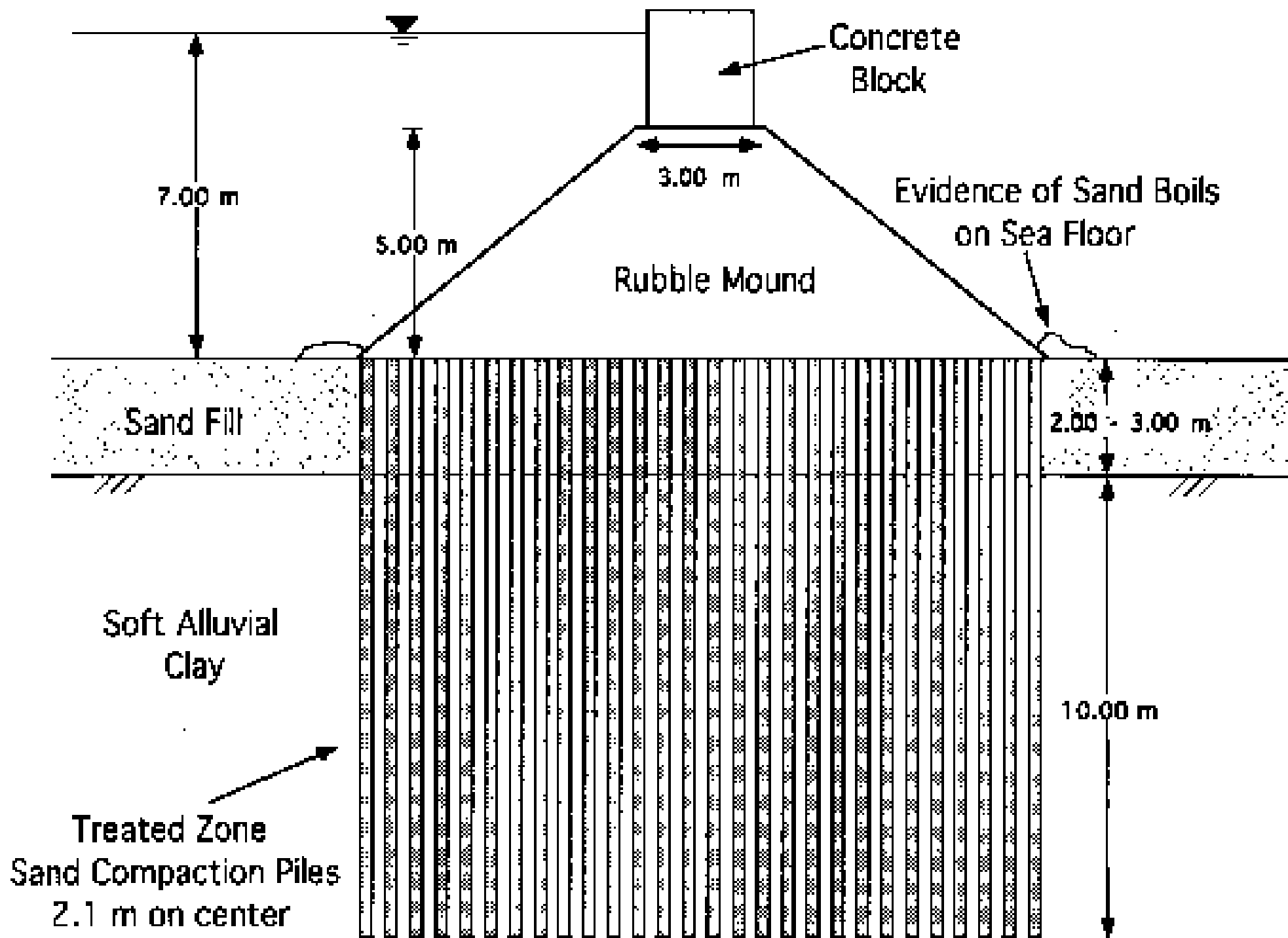


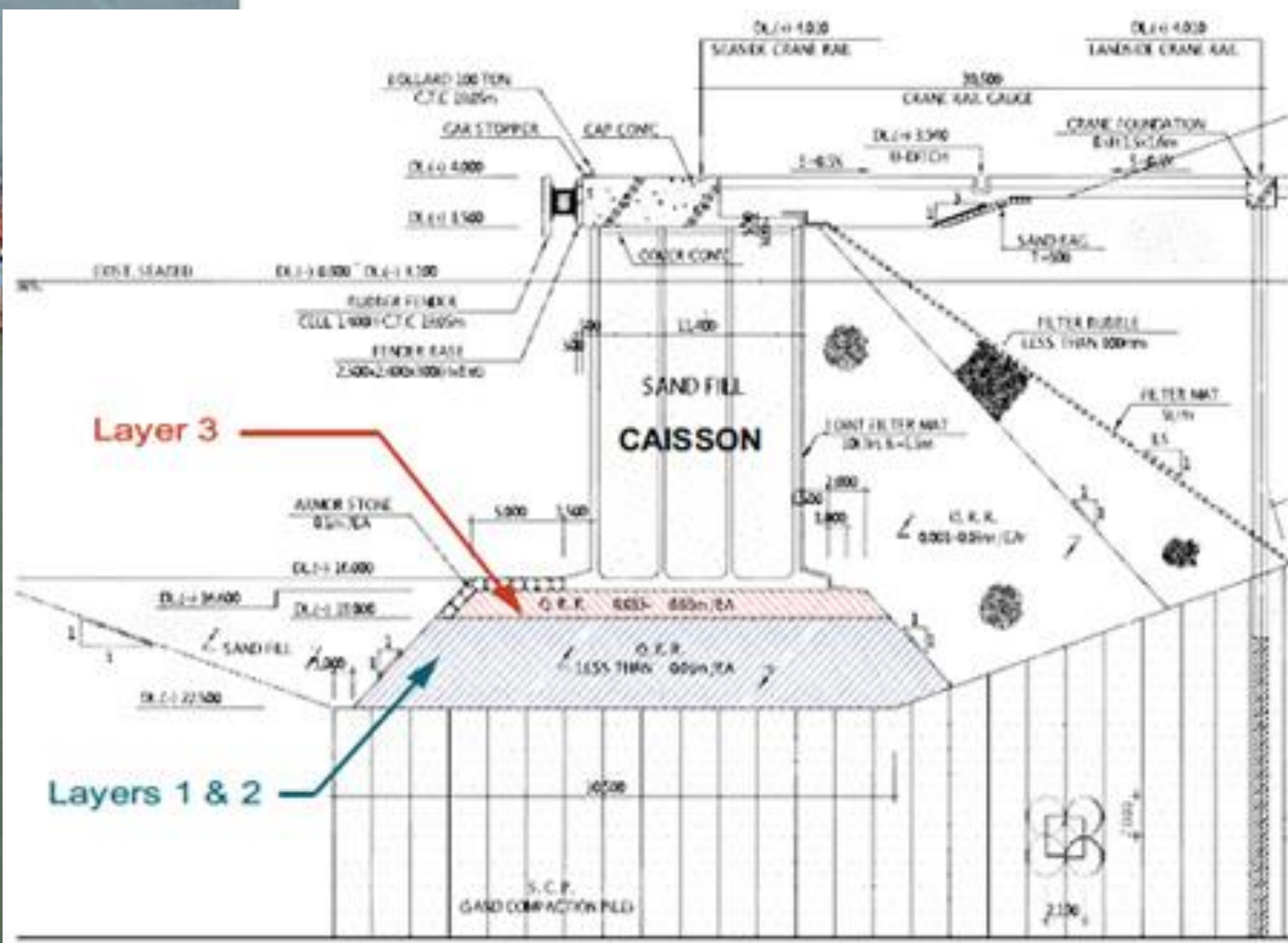
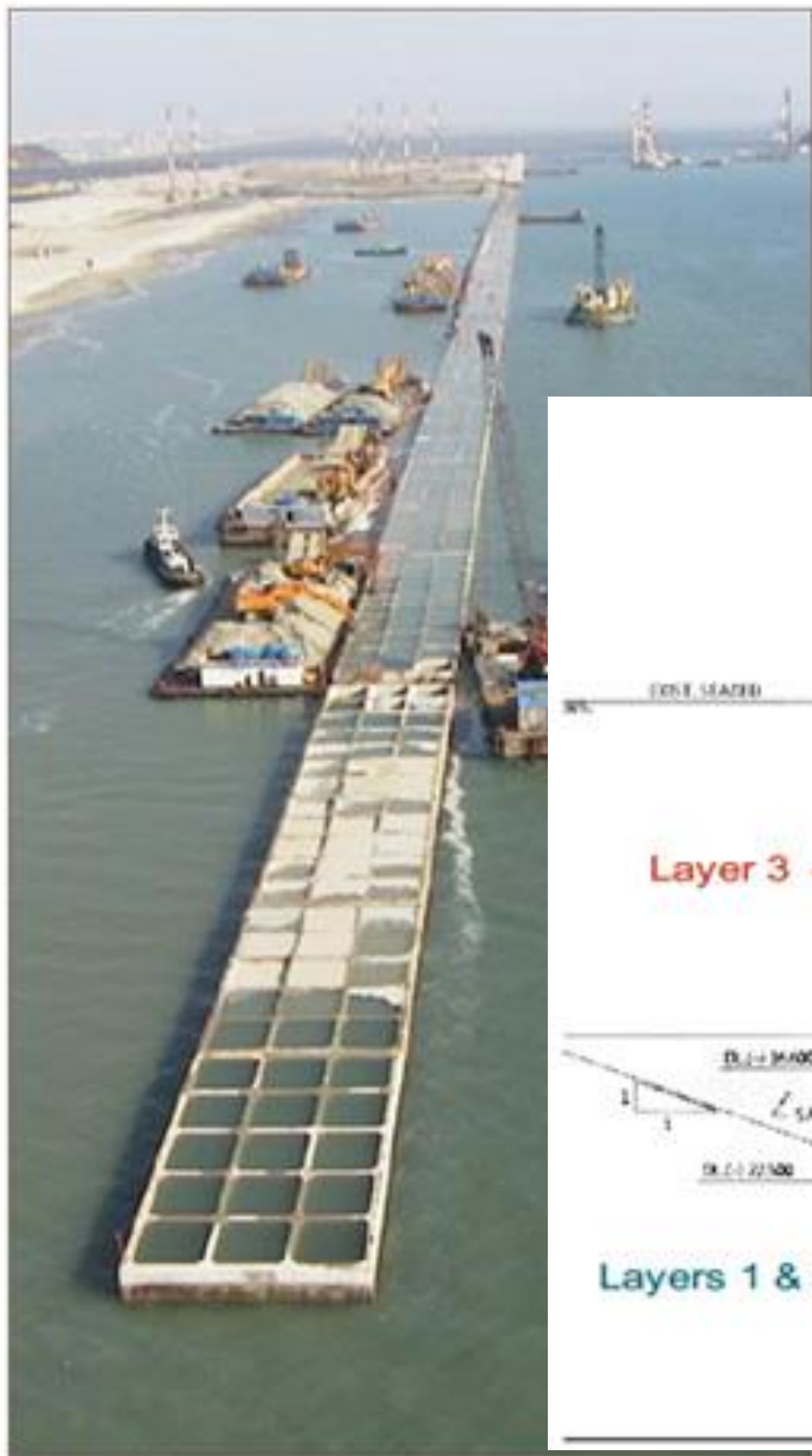
Boulanger

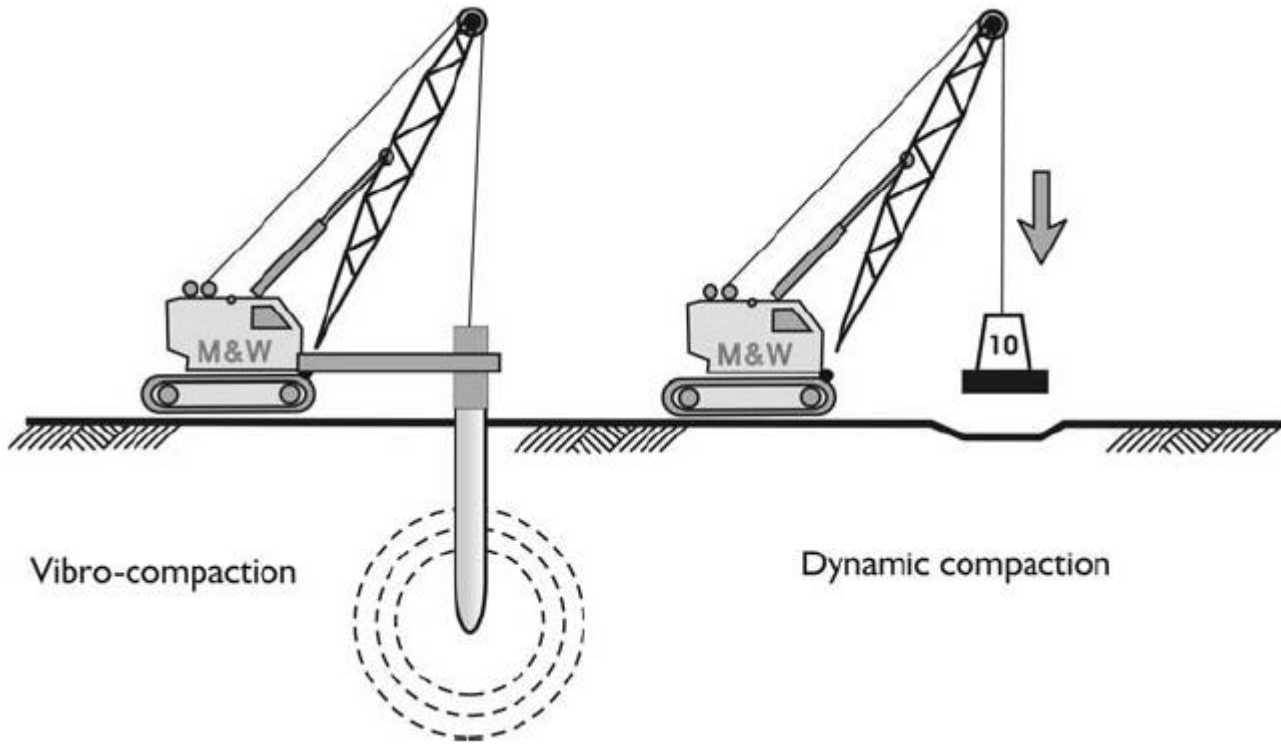


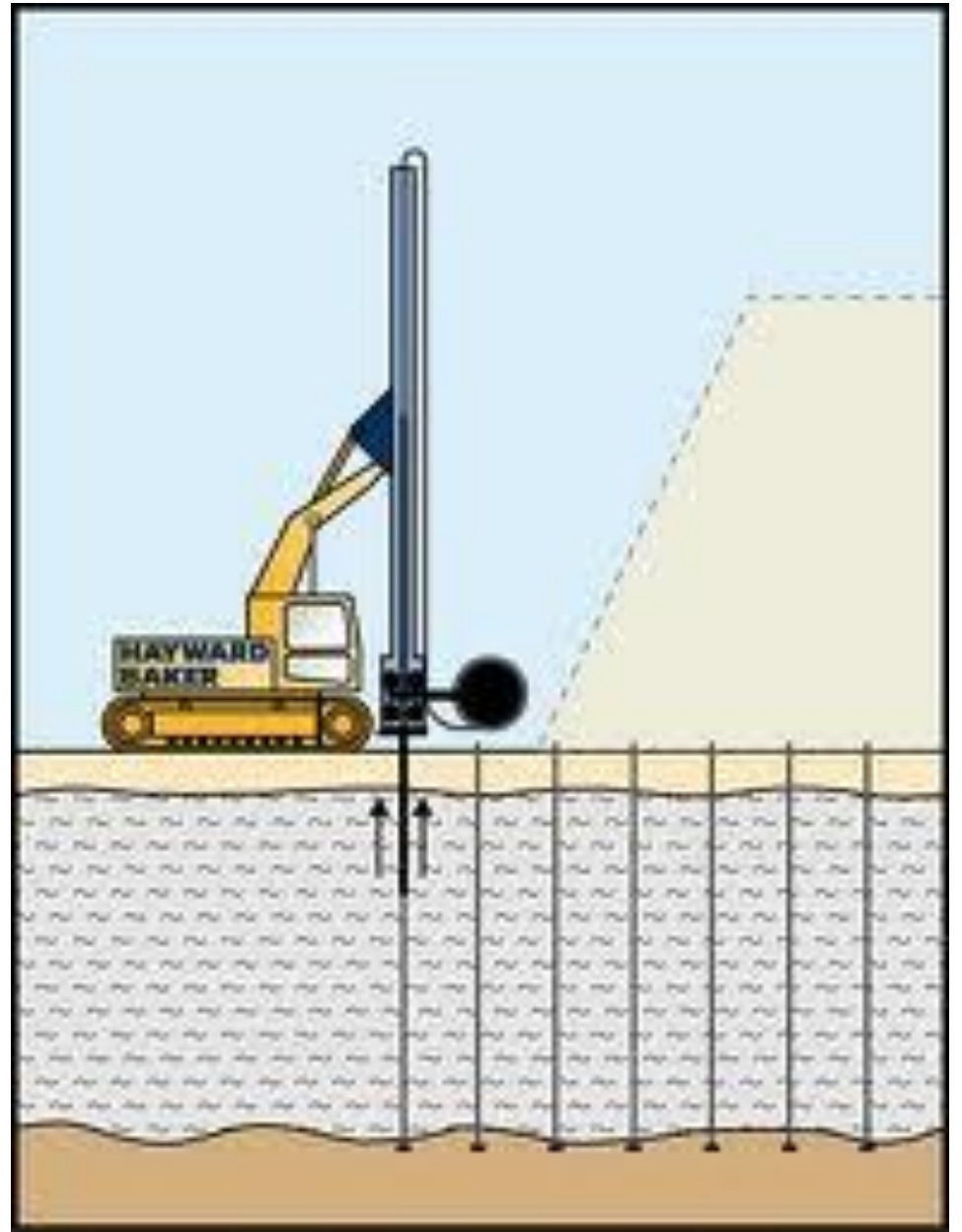
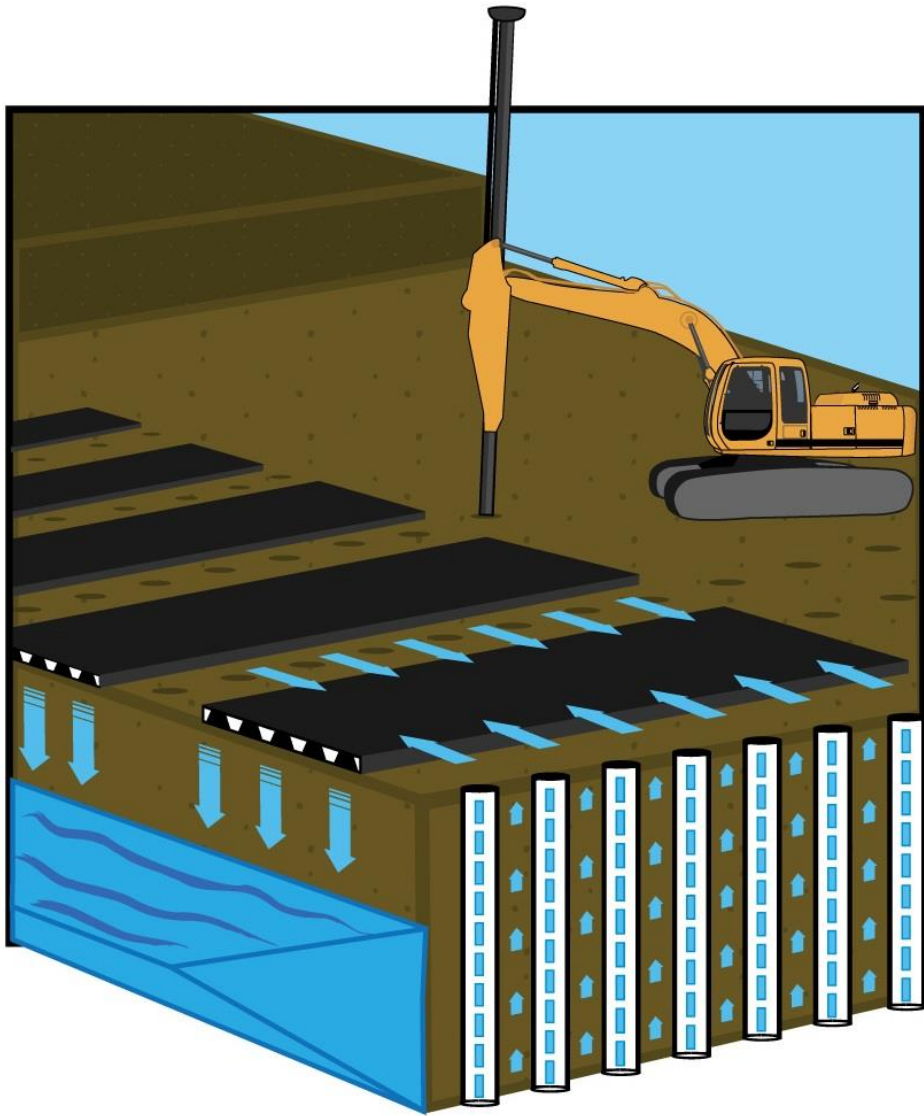




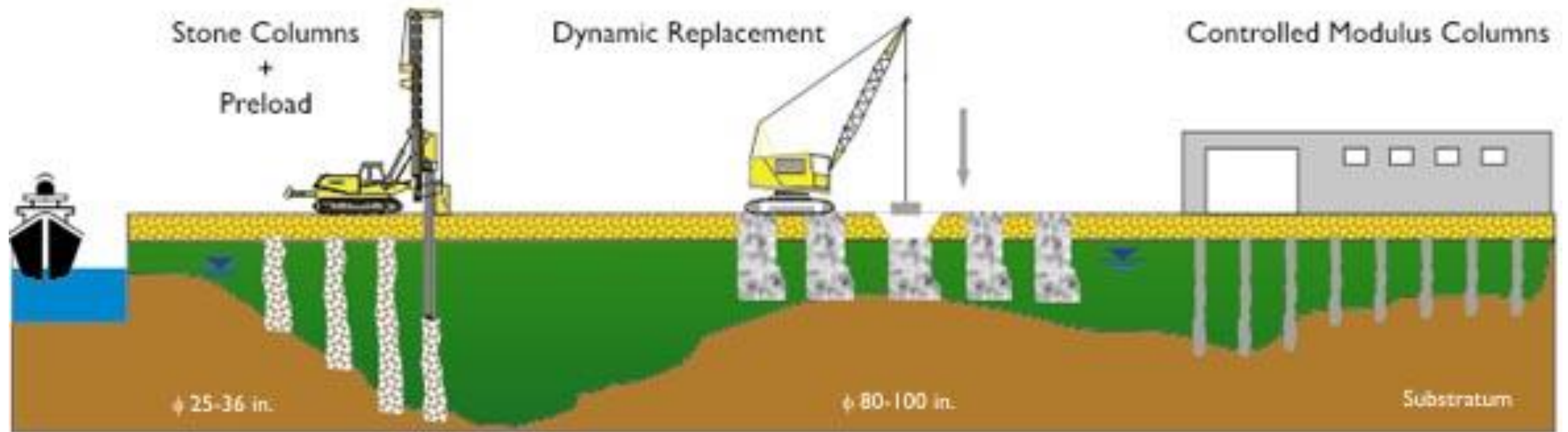




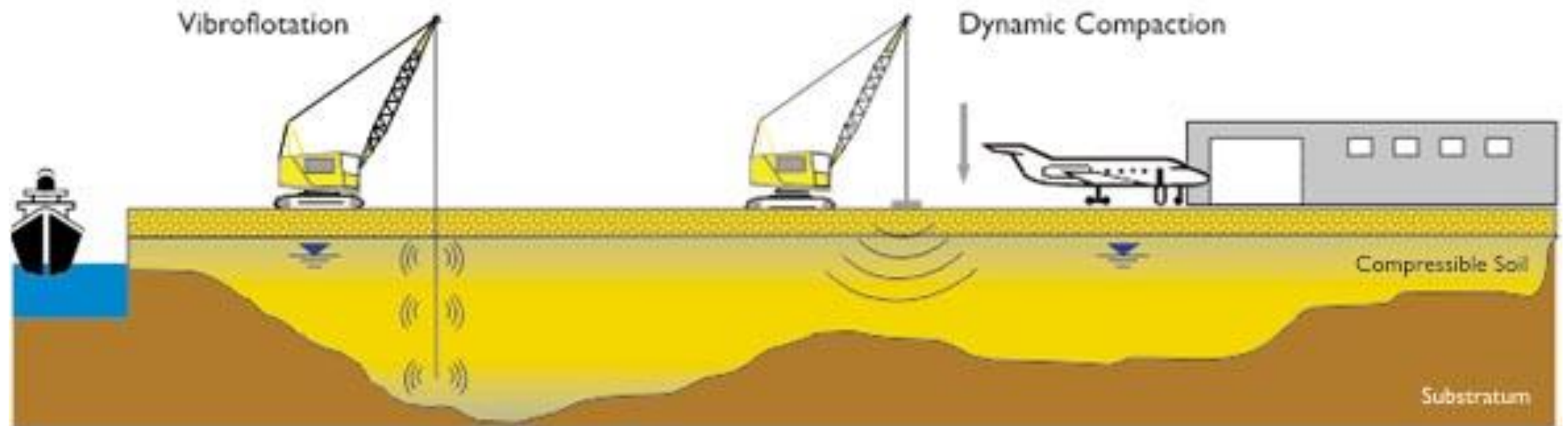








COHESIVE SOILS: Clays, Silts, Peats



GRANULAR SOILS: Gravel, Sand, Fill

