

GEOTECHNICAL DESIGN OF DRIVEN PILES UNDER AXIAL LOADS

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1 Settlement of Floating Piles

If concrete columns are not end bearing, the settlement may become an issue. The settlement of concrete column-reinforced soft foundations can be estimated using the method for piled rafts or pile groups. Horikoshi and Randolph (1999) and Poulos (2001) proposed simplified design methods to calculate the settlement of piled rafts, which are based on pile-raft interaction.

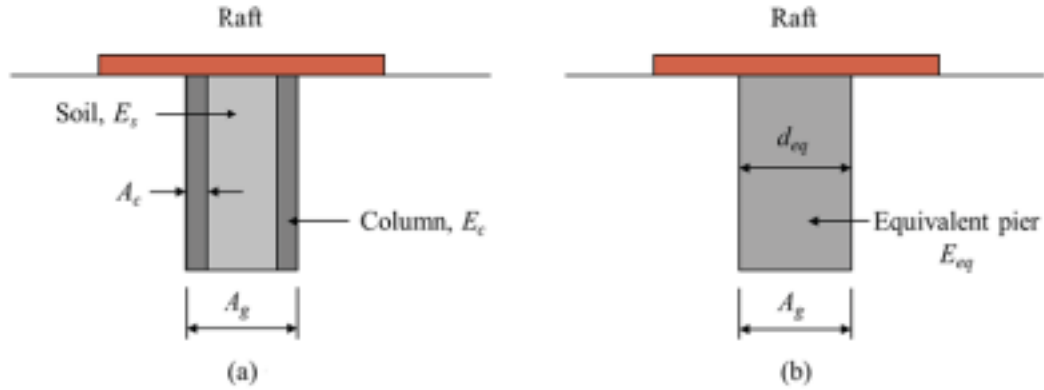


Figure 1: Equivalent Pier

Randolph (1999) used the equivalent pier concept for the piled raft method as shown in 1

soil	$\delta, \text{degrees}$	Limiting f,kips/ft ² (<i>kPa</i>)
Very loose	15	1.0 (47.8)
Loose	20	1.4 (67.0)
Medium	25	1.7 (83.1)
Dense	30	2.0 (95.5)

Table 1: uideline for Side Friction in Siliceous Soil

2 API Procedure