

Model Ground:

The model ground consisted of a dense non-liquefiable layer at the base ($D_r=90\%$) with a thickness of 1.0m overlain by a medium liquefiable sand ($D_r=50\%$) with a thickness of 1.3m. The liquefiable layer was overlain by a surficial medium dense sand layer (i.e. crust) with a thickness of 0.6m. The model ground configuration is presented in Fig. 1. The ground water table was at the depth of 0.6m. The contact pressure of the footing, which is shown in Fig. 2, was 41.6kPa which was achieved by placing additional weights on the top of the footing as shown in Fig. 2. The completed model ground is shown in Fig. 3. The density of concrete used to construct the footing was 2.616 ton/m^3 (2616 kg/m^3).

Table 1: Model soil properties

Soil Layer	Thickness (m)	Target Relative Density (%)
Layer #1	0.6	50
Layer #2	1.3	50
Layer #3	1.0	90

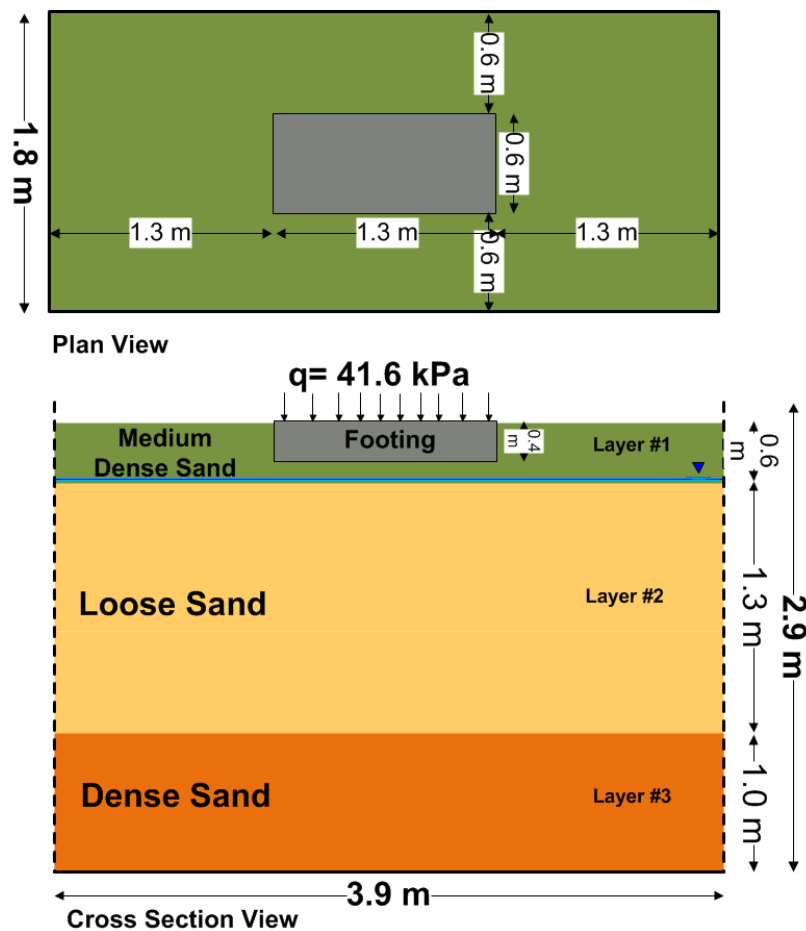


Fig. 1: Model ground configuration



Fig. 2: Model footing prior to placement and weights to replicate target contact pressure

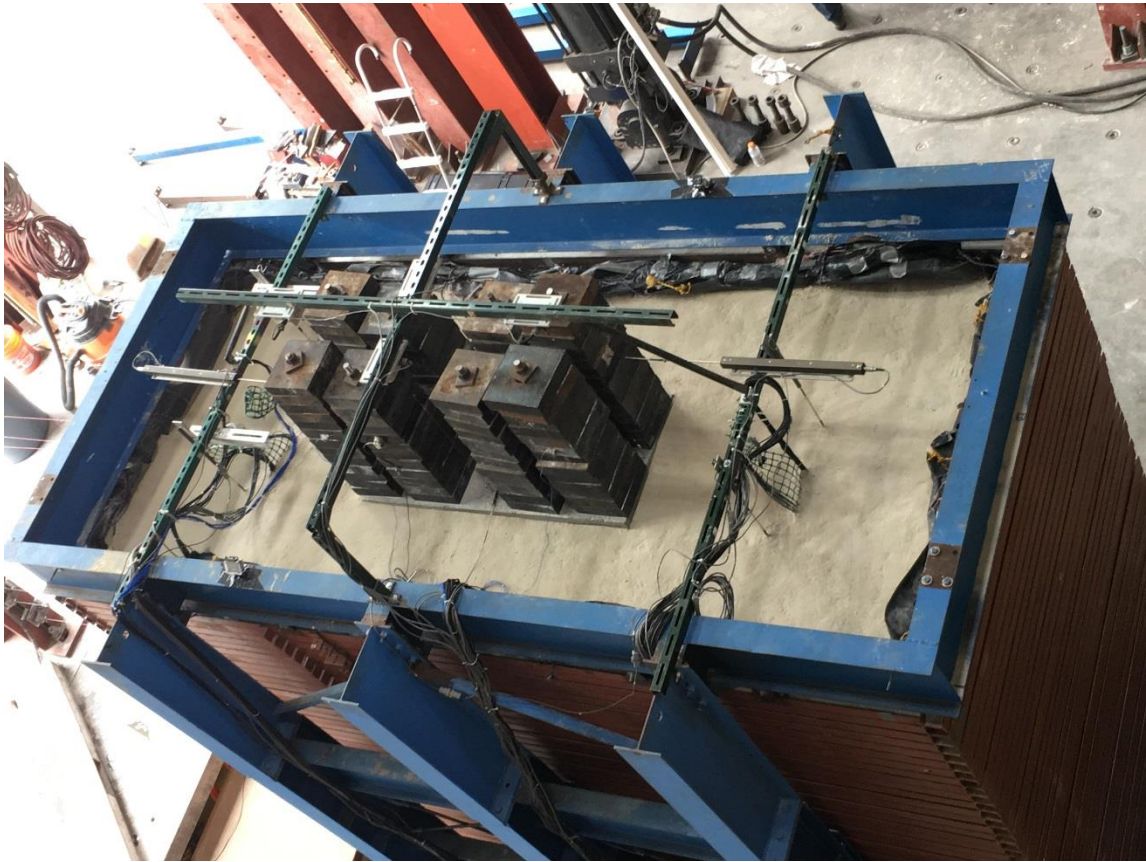


Fig. 3: Model ground prior to shaking