Thesis Title	Lateral Displacement Behavior of the Bangkok-Chonburi New Highway
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Abstract

Lateral displacement of soft clay during and after the construction of embankment might cause damage to the adjacent structures. The behaviors of the displacement are therefore the objective of this study. Field data of the Bangkok-Chonburi New Highway are collected and used for analysis. The Bangkok-Chonburi New Highway of 64.5 Kilometers is subdivided into 16 sections and 2 stages of embankment construction in each section are selected for this study. Prefabricated Vertical Drain (PVD) with preloading method is applied to accelerate the settlement. Results of study could be found as follows.

1. The ratios between the maximum lateral displacement and time (dy_m/dt) for the second stage loading varied from 0.1166 to 0.8496 millimeters per day while those for the final stage varies from 0.0752 to 0.4741 millimeters per day. The maximum upper zone are :

Second Stage : $dy_m/dt = 0.8891$ mm./day

$R^2 = 0.9437$

Final Stage : $dy_m/dt = 0.4031$ mm./day

$R^2 = 0.9754$

2. The ratios between the maximum lateral displacement and settlement (dy_m/ds) varied from 0.0667 to 0.3530 for the second stage loading and from 0.0151 to 0.2140 for the final stage. The maximum upper zone are :

Second Stage : $dy_m/ds = 0.3310$

$R^2 = 0.9892$

Final Stage : $dy_m/ds = 0.2194$

$R^2 = 0.9850$

The maximum displacement and settlement ratio as determined from the field measurement is found to be lower than the empirical value calculated by the method of Tavenas et al [1].

Keywords : Lateral Displacement / Settlement / PVD / Preloading