ABSTRACT

Soil condition in north beach reclamation area is consist of very soft clay. Clay is soil that have low support capacity and the characteristic of clay are high compresible and low permeability. Since the characteristic of clay, it can causes of high konsolidation with long period. To antisipate of the high konsolidation with long period so that have to be done an improvement subgrade to decrease konsolidation period.

Combination between preloading and PVD is one of method that use to decrease konsolidation process. The combination of this method is done by giving initial load with preloading in this clay which have been given vertical drainage system with PVD. The subgrade under embankment also be able to have to hold a shear force, because of that condition the subgrade need to stronger with micropile. The purpose of using micropile is to increase shear tense in subgrade. If the shear tense of subgrade is increase automatically support capacity around the subgrade increase too.
Planning of subgrade improvement in soft clay on East Ancol reklamation area with combination between preloading and Pre-fabricated Vertical Drains. PVD is stake in 16 m depth with \( h \) triangle pattern and space about 1.2 m. By using PVD konsolidation period is 22 week to reach degree of konsolidation 90\% (\( U=90\% \)). With kombination preloading and PVD method completely consolidation is 3,276 m be able to disappear in 23 week. Improvement subgrade under an embankment is use 13 micropile each metre.

Key word : consolidation, preloading, PVD, Micropile