

ABSTRAK

Dinding penahan tanah merupakan salah satu teknik pengendalian tanah yang sangat diperlukan untuk menggurangi kelongsoran. Pembangunan dinding penahan tanah yang tergolong sederhana perlu mempertimbangkan model, analisis material dan perhitungan longsor yang akan jatuh pada dinding penahan tanah, perencanaan ini menggunakan metode pemodelan dinding penahan tanah tipe Kantilever dengan tinggi 5 m , lebar atas 0,75 m, dengan lebar bawah 4 m , dinding penahan tanah ini juga menggunakan pondasi tiang pancang agar stabilitas tanah dan keseluruhan bangunan dapat memenuhi SF bangunan yang diinginkan. pondasi tiang pancang ini menggunakan kedalaman 7 m dibawah permukaan tanah dan menggunakan dimensi 65 x 65 cm . Analisis perencanaan ini menggunakan metode Terzaghi yang memperhitungkan stabilitas dinding penahan tanah terhadap faktor keamanan guling, geser dan daya dukung tanah. Berdasarkan hasil perencanaan menunjukan bahwa dinding penahan tanah tipe Kantilever tinggi 5 meter, tidak aman terhadap bahaya guling, geser, dan daya dukung tanah. Masing masing angka keamanannya yaitu : $SF_{gl} = 0,021 > 1,5$, $SF_{gs} = 0,0471 > 1,5$, Terhadap daya dukung tanah $1.060,352 \text{ t/m}^2 < 55,4536 \text{ t/m}^2$. Dikarenakan angka keamanan tidak tercapai, maka perencanaan dinding di tambahkan pondasi tiang pancang pada dinding penahan tanah tersebut dengan spesifikasi tiang : Dimensi = 65 x 65cm, Panjang 7m, Kebutuhan tiang pancang 45 buah tiang pancang dan ditanam sedalam 7 m.

Kata kunci : *Dinding penahan tanah, Pondasi Tiang Pancang, Metode Tarzaghi.*

ABSTRACT

Soil retaining walls are one of the soil control techniques that are indispensable for treating cladding. The construction of a relatively simple soil retaining wall needs to consider the model, material analysis and calculation of avalanches that will fall on the soil retaining wall, this planning uses the method of modeling the Cantilever type soil retaining wall with a height of 5 m, an upper width of 0.75 m, with a bottom width of 4 m, this soil retaining wall also uses a pile foundation so that the stability of the soil and the whole building can meet the desired SF of the building. This pile foundation uses a depth of 7 m below ground level and uses dimensions of 65 x 65 cm. This planning analysis uses the Terzaghi method which takes into account the stability of the retaining wall of the soil against the safety factors of rolling, shear and carrying capacity of the soil. Based on the results of the planning, it shows that the retaining wall of the Cantilever type soil is 5 meters high, unsafe against the dangers of bolstering, sliding, and soil carrying capacity. Each security number is: $SF_{gl} = 0.021 > 1.5$, $SF_{gs} = 0.0471 > 1.5$, Against soil carrying capacity $1,060,352 \text{ t / m}^2 < 55.4536 \text{ t / m}^2$. Because the safety figure is not achieved, the wall planning is added to the pile foundation on the soil retaining wall with pole specifications: Dimensions = 65 x 65cm, Length 7m, Pile needs 45 piles and planted 7 m deep.

Keywords : *Earth retaining wall, Pile Foundation, Tarzaghi Method.*