

## **ABSTRACT**

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(xvi + 69 + Attachment)

*North Jakarta is one of the areas of the city of Jakarta that is often affected by tidal floods every year. The north Jakarta area is lowland and most of the area is in the coastal area of Jakarta. The purpose of building retaining walls is to overcome the threat of tidal floods which are increasing due to subsidence of land levels and rising sea levels. The slope stability value on the coast of North Jakarta is 1.457, meaning it is less than the safety factor of 1.5, which means that the land slope on the coast of North Jakarta is unstable, so a retaining wall is needed. The type of retaining wall used for the construction of the Jakarta coastal safety embankment is the cantilever type. The calculation of retaining walls refers to SNI 8460-2017 "Geotechnical Design Requirements" and the calculation of the draft cost budget refers to the Regulation of the Minister of Public Works and Public Housing Number 1 of 2022 concerning "Guidelines for Preparing Cost Estimates for Construction Work in the Field of Public Works and Public Housing". The cantilever type retaining wall is planned to be built with a height of 5 meters, a foundation plate width of 3.5 meters, a foundation plate height of 0.5 meters and a span length of 150 meters. Calculation of the stability analysis of soil shifts was found to be 8.602, stability against overturning of the soil was 3.719 and stability against collapse of the soil's bearing capacity was 53.659 and a total settlement of 29.35 mm. Calculation of vertical wall reinforcement in pieces I – I with D16-300, pieces II – II D16-300 and pieces III – III D16-250, while the foundation plate reinforcement in pieces IV – IV with D16-250 and pieces V – V D16 -250. The total cost required for planning a cantilever type retaining wall is IDR. 1,188,407,468 includes VAT of 11%.*

*Keywords: Retaining Wall, Cantilever Type, Stability Analysis, Budget Plan.*