

ABSTRACT
APPLICATION OF VALUE ENGINEERING IN THE CONSTRUCTION
OF SOIL RETAINING WALL USING SITE MIX AS A REPLACEMENT
FOR BENTONITE (CASE STUDY OF SERPONG APARTMENT
PROJECTS)

by
SHARWANDA ASFARINA
No. Mahasiswa : 327171037

In an effort to obtain efficient, stable and optimal design results with good quality. One of the analytical methods used to evaluate construction project planning is engineering value. The objectives of value engineering are cost savings, performance optimization, and time efficiency, but still consider the function, quality, and aesthetics of the project. Value engineering analysis starts with selecting an activity that has a higher cost than other activities, then analyzes to determine the classification of alternative works or materials with basic and secondary functions according to the requirements in order to get better costs. In this value analysis, Site Mix was chosen to replace Bentonite in the work of retaining walls. The savings obtained were 10% for bored pile work and 30.2% for casting work. Based on the results of the prices that have been obtained, it can be concluded that the use of site mix can provide far greater savings compared to using bentonite. Both of the analysis of the work unit price above, found both for bore pile foundation work as a whole as well as for casting work only with K250 quality concrete, giving the result that the use of the site mix will be more economical. In addition to using literature studies and observations, the next method is survey questionnaires by spreading questions to be filled out by respondents who are then entered into the SPSS program and then tested for validity, reliability testing, and RII. From the results of the questionnaire the results support that the site mix can be used as a substitute for bentonite in the work of retaining walls.

Keywords :

Value Engineering, Bentonite, Site Mix, Questionnaire, SPSS