

## **ABSTRACT**

### **THE EFFECT OF HIGH PLASTICITY CLAY WITH ZEOLITE ADDITIVE ON CBR TEST AND DIRECT SHEAR TEST**

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This study was conducted to determine the effect of mixing between the zeolite and the clay against the cbr value and soil shear strength. This is done because if the structures build over the clay will cause some problems, among others, the small value of CBR and shear strength value on the soil. Therefore, prior to the construction of structures on the land, soil stabilization needs to be done. On this research, soil stabilization using a mixture of zeolite and clay.

To determine the effect of mixing between the zeolite and the clay against the value of CBR and shear strength on clay is done by varying the zeolite mixture of 6%, 8%, 10%. Mixing between the zeolite and the clay is done with a long ripening 14 days and ripening for 4 days. Testing was conducted on the physical properties of clay soil testing both native soil and soil that has been mixed with zeolite, and mechanical testing that includes standard compaction test, CBR test and direct shear strength test.

Based on the research results, the addition of zeolites with curing and immersion time can increase the value of CBR. The highest value obtained on the sample CBR clay with a mixture of 10% and increasing the maximum shear strength value after the soil is mixed with zeolite in the addition of a maximum of 10%. The value of CBR and shear strength increases with the addition of a percentage in the mixture.

Key words: Clay Soil, Zeolite, CBR, Soil Shear Strength