CHAPTER VI

CONCLUSIONS AND SUGGESTIONS FOR FUTURE STUDY

Conclusions

From the tested results presented in the previous chapter, the following conclusions could be drawn :

1. Addition of lime on the soil would reduce the plasticity and caused the soil to be more friable and workability.

2. The optimum lime content used for plasticity reduction, so-called "lime fixation point" was 6 % for Nong Ngoo Hao clay.

3. For lime-cement stabilization on Nong Ngoo Hao clay, at the same amount of lime, the additional cement content caused a slight decrease in density and a slight increase in the optimum moisture content until the cement content in the mixture reached 5 %. Both the density and the optimum moisture content remained nearly constant.

4. The strength of lime-cement stabilized soil increased by increasing cement content and prolonging curing period at the same amount of lime.

5. If 250 psi or 17 ksc. of compressive strength were used a design criterion, the minimum amount of cement which required to stabilize Nong Ngoo Hao clay should be 9 % at 6 % lime content.

6. Increasing cement content at the same amount of lime gave higher C.B.R. value, and the swelling greatly decreased.

7. If 25 % C.B.R. were used as a design criterion for subbase construction, the minimum amount of cement required to stabilize Nong Ngoo Hao Clay with 6 % lime content would range from 7 % to 9 %

8. Lime and cement were the beneficial stabilizers in the durability improvement. The durability increased with an increase of cement content at the same amount of lime. And the durability on the wet side was higher than the dry side.

9. The cement content that satisfied the durability would range from 7 % to 9 % with the same amount of 6 % lime when stabilized on Nong Ngoo Hao clay.

Suggestions for Future Study

For further research on application of this field the following studies are suggested :

1. Study the effect of shrinkage and expansion for lime-cement soil in long term service.

2. Study to use agricultural or other waste materials such as rice hull ash, as secondary additives in lime stabilization or cement stabilization on clayey soils.

3. Study the most realistic curing temperature that can be attained in the field for lime-cement stabilization on clayey soils.