

## ABSTRACT

The Consolid System by American Consolid Inc. is a three product system that, according to product literature, "enables any soil, found anywhere, to be upgraded to achieve better characteristics necessary in improving road life and quality". Consolid was evaluated along with mixes of cement-fly ash and hydrated lime on two soils. The soils were an A-2-4(0) with zero plasticity index and an A-7-8(18) with a 31 plasticity index.

American Consolid Inc. recommended an application rate of 0.10% Consolid 444 and 1.00% Conservex by dry soil weight. The application rate chosen for cement-fly ash was 5% cement and 15% fly ash and for hydrated lime it was 6.5%. Testing involved triaxial testing of specimens after water soaking, unconfined compressive strength of specimens before and after water soaking, and freeze and thaw testing of specimens after water soaking. All specimens were compacted to standard proctor at optimum moisture.

The cement-fly ash treated mixes had the highest strength and durability followed by the hydrated lime treated mixes.

### CONCLUSIONS

Based on strength and durability as tested in the laboratory, cement-fly ash treatment of the soils performed better than both hydrated lime treatment and Consolid treatment at the rates used. Lime treatment also performed better than Consolid treatment at the rates applied.

### RECOMMENDATIONS

Based on this study, no more than a limited number of field trials should be undertaken at this time.